



FERO ENGINEERING

ENVIRONMENTAL ENGINEERING & CONSULTING

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Mr. David Young
California Regional Water Quality Control Board
Los Angeles Region
Site Cleanup Program
320 West 4th Street, Suite 200
Los Angeles, California 90013

Second Semi-Annual Groundwater Well Monitoring Report 2013

Continental Heat Treating

10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)

Dear Mr. Young:

Fero Environmental Engineering, Inc. (Fero) conducted the second semi-annual groundwater monitoring for 2013 at the subject Continental Heat Treating ("CHT") site on October 10, 2013. The CHT site is located to the south of the former Jalk Fee Property ("Jalk Fee") which has an active environmental case with the Regional Water Quality Control Board for releases of halogenated volatile organic compounds ("VOC"), including tetrachloroethylene ("PCE") and trichloroethylene ("TCE") on the Jalk Fee site. The groundwater monitoring event was coordinated with Cardno ERI ("Cardno"), Exxon/Mobil's consultant; for their ongoing investigation on the Jalk Fee site to the north so that the groundwater samples were collected at both sites on the same day. During the sampling event, Fero monitored ten wells (MW1, MW2, MW3, MW4, MW5s, MW5m, MW5d, MW6s, MW6m and MW6d) on the CHT site. Fero incorporated the data collected by Cardno from thirteen of the near field Jalk Fee upgradient wells (MW5, MW6a, MW6b, MW6c, MW7a, MW7b, MW7c, MW9a, MW9b, MW9c, MW10a, MW10b and MW10c) on the Jalk Fee site.

Site Description

The CHT site ("Site") is an approximate 70,000 ft² rectangular parcel located at 10643 Norwalk Boulevard, Santa Fe Springs, California 90670 on the west side of Norwalk Boulevard approximately 450 feet north of Florence Avenue. The Site is surrounded by primarily industrial properties: Coast Aluminum and Architectural Inc. to the northwest, Contents Restorers of California to the north, Oxyhealth LLC to the south, Excel Garden Products to the east across Norwalk Boulevard and a trophy warehouse/distribution tenant to the west. Improvements on the Site include a 20,000 ft² industrial building built in 1969 which is occupied by CHT. Construction activities at the CHT site during 2011 and 2012 included; a 5,000 ft² addition to the west end of the existing building, upgrades to the face of the entire building consistent with City of Santa Fe Springs requirements, and Site paving. Figure 1 provides a plot of the Site and it, among other things, indicates the locations of the CHT wells and the Jalk Fee wells.

CHT or its predecessor has occupied the Site since the building was built in 1969 and they use the building to heat treat metal parts. Although no longer in use, a PCE solvent degreaser in the approximate middle of the building was historically operated from 1986 to 1995. Centec reported that prior investigations around the former degreaser and in the northwest corner of the CHT site identified concentrations of certain chlorinated organics.¹

Former occupants of the properties adjacent to the CHT site were Mobil "Jalk Fee" to the north and former Hathaway oil production to the south and west. Centec reported that Hathaway stored abandoned equipment proximate to the northwest corner of the CHT site and that the former Jalk Fee property was used for oil production and storage, as well as other uses, for several decades. Centec further indicated that significant soils and groundwater contamination had been detected on the former Jalk Fee property from at least 1990. Extremely high concentrations of PCE were reportedly detected within 6 feet of CHT's northwestern fence and approximately 55 feet north of the CHT fence. Mobil reportedly removed soil from VOC impacted areas of the Jalk Fee site (locations indicated on Figures 1-9), including an excavation slightly north of CHT's northwest corner.

According to a February 21, 1975 Santa Fe Springs Fire Department Permit, Hathaway operated a 10,000 gallon gasoline underground storage tank ("UST"), a 5,000 gallon diesel UST and a 5,000 gallon solvent UST on its property to the south of the CHT site.

Ongoing soils and groundwater investigations on the former Jalk Fee property indicate elevated concentrations of chlorinated organics and lesser concentrations of fuel hydrocarbons in the soil, soil gas and groundwater. The general groundwater flow direction reported by Cardno ERI was to the south toward the CHT site and therefore the organics originating on the former Jalk Fee property represent a significant threat to the CHT site.²

Cardno confirmed that oil production facilities occupied the former Jalk Fee property from the 1920's to 1990 when such facilities were removed so the site could be redeveloped. Cardno further indicated that TRC Alton Geoscience ("TRC") performed remediation at the Jalk Fee site along with an exposure assessment that suggested the site did not represent a significant threat to site occupation or to the underlying groundwater. The City of Santa Fe Springs reportedly did not hold the same opinion and reopened the Jalk Fee site for further investigations and evaluation.

Geology and Hydrogeology

The CHT site is located within the Santa Fe Springs Oil Field on the Santa Fe Springs Plain, which is part of the Montebello Forebay non-pressure area of the Central Basin. Groundwater is found throughout the region under unconfined conditions in the Recent Alluvium and in the underlying

¹ Collins, Steven N., REA and Daniel R. Louks, R.G., *Phase II Site Investigation Report*, January 2002, Centec Engineering, Inc., 1601 Dove Street, Suite 100, Newport Beach, CA 92660

² Anderson, James and Andy Nelson, Revised Well Installation Report, Former ExxonMobil Jalk Fee Property, May 17, 2011, Cardno ERI, 4572 Telephone Road, Suite 916, Ventura, CA 93003

Exposition Aquifer. Within the Santa Fe Springs Oil Field, the upper 100 feet of sediments consist predominantly of permeable sands, although the upper 15 feet of sediments (and at greater depths particularly inside the building on the Site) have a higher silt and clay content and lower permeability. Investigations on the CHT site indicate the underlying soils consist of inter-bedded layers of silt, sandy silt, sand and gravel from the surface to at least 170 feet below grade (“fbg”).

The first regional groundwater-bearing zone in the vicinity of the Site is the Exposition Aquifer, which is encountered at approximately 100 fbg. This aquifer ranges in thickness from 75 to 100 feet and is underlain by a 50 foot thick aquiclude, beneath which is the Gage Aquifer.³ The depth to groundwater during the last year of monitoring has ranged from approximately 88 to 91 feet below top of casing and the slope of the groundwater table has consistently indicated a flow direction of slightly west of south under a most recent gradient of approximately 0.0078 ft/ft.

Groundwater Well Installations and Sampling

Fero installed three groundwater monitoring wells on the CHT site during August 2010 as directed by the Regional Water Quality Control Board (“RWQCB”), May 5, 2010, *Requirements to Submit Technical Reports (California Water Code Section 13267), Continental Heat Treating 10643 Norwalk Boulevard, Santa Fe Springs, California (Site ID NO. 204GW00, SCP No. 1057)*. This document requested, “further delineation of the lateral and vertical distribution of impacted soil, soil gas, and groundwater on and offsite (if necessary)”. Therefore, Fero obtained permits from the Los Angeles County Department of Public Health to construct three groundwater monitoring wells on the CHT site. BC2 Environmental Corporation was subsequently retained to install the wells during the period from August 3-5, 2010. Well MW1 was installed southwest of the onsite building near the southern property line in an anticipated down gradient groundwater flow direction, well MW2 was located near the northwestern corner of the CHT site, and well MW3 was located near the northeastern corner of the CHT site. Wells MW1 & MW2 were installed using a CME-75 drill rig fitted with 8 inch diameter hollow stem augers. Because of limitations due to overhead power lines and trees, well MW3 was installed with a limited access rig fitted with the same 8 inch diameter augers. Well locations are indicated on Figure 1.

The well borings were logged by a Fero geologist and were visually classified in the field in accordance with the Unified Soil Classification System (USCS) and American Society for Testing and Materials (ASTM) which include evaluations of moisture content, consistency, texture, and soil characteristics. The soils generally consisted of sands and silts. Soil samples were obtained at five foot intervals to a depth of 95 feet in all borings. Groundwater was encountered at a depth of approximately 98 feet in the well borings.

The monitoring wells were constructed of 2 inch diameter Schedule 40 PVC casing to a depth of 120 feet below grade (fbg) with a 30 foot screened interval. The screen consisted of 0.020 inch slotted pipe and the filter pack in the annular space to approximately 2 foot above the screened section consisted of #3 Monterey sand. Four to five feet of hydrated bentonite chips were placed on top of

³ California Department of Water Resources. 1961. *Groundwater Geology of the Coastal Plain of Los Angeles County, Idealized Geologic Sections M-M’-M’’ and N-N’*.

the sand pack and the annulus from the bentonite seal to approximately 1 fbg was filled (tremie method) with Portland type III cement slurry and the installations were completed at grade with concrete and a traffic-rated well vault.

The well casings were surveyed on August 10, 2010 with respect to Mean Sea Level and proper lateral controls by Dulin & Boynton. On August 9, 2010, each of the wells were subsequently developed using a Smeal development rig using a decontaminated suction bailer, a surging assembly and well pump until water flowed unhindered through the well screens of each well and the development water appeared free of soil fines. On August 20, 2010, after the wells had time to stabilize, the depth to the water surface in each well was measured with electronic gauging equipment which allows an accuracy of 0.01 feet.

Monitoring well MW4 was installed inside the CHT building proximate to the former degreaser location on October 24 & 25, 2011 at the location indicated on Figure 1. The boring was conducted to 120 fbg with a limited access CME 75 (because of overhead restrictions). Consistent with the RWQCB conditional approval, the boring was finished as a groundwater monitoring/VES well. A pilot hole was drilled with 8" augers followed by 10" augers to set the well. The well consists of a 4" PVC pipe with 0.020" slotted sections from 41.5 to 116.5 fbg. The boring annulus was filled to approximately 1 foot above the slotted section of the well with #3 Monterey sand. The space above the filter pack was filled with hydrated bentonite chips to 35 fbg and the annulus was filled from 35 fbg to approximately 1 fbg with neat cement, consistent with County of Los Angeles requirements. The well installation was finished at grade with a traffic rated road vault which was concreted in place. The well was installed consistent with a permit from the County. A well schedule is included as Table 1.

Groundwater monitoring using all of the CHT site wells (MW1-4) was first conducted on December 23, 2011. Initial attempts to develop MW4 with a bailer and stainless steel pump were not as successful as hoped so the first sample collected from MW4 on December 23, 2011 was very turbid. Additional development occurred on January 10, 2012 which removed considerably more fines using a swab disc and suction bailer. A sample was collected following development and additional purging and those data were reported in a January 13, 2012 monitoring report to the RWQCB. A second round of groundwater monitoring was conducted on May 3, 2012. That monitoring event was the subject of Fero's, *First Semi-Annual Groundwater Well Monitoring Report 2012, Continental Heat Treating, 10643 Norwalk Boulevard, Santa Fe Springs, California, (Site Id. No. 204GW00, SCP No. 1057)*, dated August 13, 2012.

During the sampling event, Fero gauged the elevation of groundwater in the four wells on the site (MW1-MW4) as indicated above. Elevation changes at the CHT site due to construction at the time required modifications in at least one of the well casings so a new well survey was conducted on December 14, 2011 to tie the modified wellheads together to vertical and lateral controls. Elevation gauging data and survey modifications are indicated in Table 2.

Fero conducted additional well installations at the CHT site consistent with Fero's, November 15, 2011, *Soils Investigation Report and Groundwater Well Installation Work Plan* ("Workplan"), with the Regional Water Quality Control Board – Los Angeles Region's, *Requirement to Submit Additional Technical Reports and Approval of Work Plan for Additional Groundwater Investigation Pursuant to California Water Code Section 13267 Order* ("Directive"), dated January 23, 2012 and with the subsurface investigation portion of the RWQCB's, *Approval of Work Plan for Additional Subsurface Investigation and Indoor Air Sampling Pursuant to California Water Code Section 13267 Order* ("Approval"). The RWQCB Directive approved the installation of groundwater monitoring wells discussed in Fero's Workplan and requested additional investigations "to delineate the vertical and lateral extent of the VOC plume in groundwater."

The well installations were completed and groundwater sampling was conducted in a coordinated effort with Cardno, ExxonMobil's consultant, in connection with the former Jalk Fee property to the north. The sampling locations were additionally modified consistent with RWQCB discussions during an onsite meeting on January 12, 2012.

Consistent with the well installation approval in the Directive and with the Approval, two well clusters (MW5 and MW6) were installed at the CHT site. To remain consistent with the wells installed on the Jalk Fee property, Fero install all of the MW5 and MW6 wells as single installations in separate boreholes and completed all of the wells with 4 inch PVC casings. The locations of the well clusters are indicated on Figure 1.

The MW5 and MW6 well clusters were installed with either a CME-75 or CME-85 with one cluster along the northern property line (MW6) and one along the southern property line (MW5) as indicated on Figure 1. The shallow borings at each location were conducted to 110 fbg and soil samples were collected at 5 foot intervals starting at 5 fbg for lithologic logging. A pilot hole was drilled at each location with 8" augers followed by 10" augers to set the well casings. The wells consisted of 4" PVC pipe with 0.020" slotted sections. The southern water table well (MW5s) screen extended from 90 to 110 fbg. The northern water table well (MW6s) was installed with an extended screened interval from 20 to 110 fbg to allow for possible future use with a vapor extraction system ("VES"). The boring annuli were filled to approximately 1 foot above the slotted section of the well with #3 Monterey sand, the space above the filter pack was filled with 4 to 5 feet of hydrated bentonite chips and the remaining annuli were filled to 1 fbg with neat cement, consistent with County of Los Angeles requirements. The well installations were finished at grade with traffic rated road vaults which were concreted in place. The well installations were permitted through the County of Los Angeles Department of Health Services.

In an effort to obtain consistent data with Cardno's proposal for the Jalk Fee site, the screened section of the deeper well casings (MW5d & MW6d) at each location were installed from 160 to 170 fbg and the screen sections of the middle wells (MW5m & MW6m) extended from 130 to 140 fbg. The annuli to approximately 1 foot above the screen at each well installation were filled with #3 sand. Approximately 5 feet of each annulus above the well screen pack was sealed with hydrated bentonite chips and the annulus above the bentonite chips to 1 foot below the surface will be filled with neat cement. All of the well locations were completed with well vaults. Table 1 provides a schedule of the well installations.

During installations, the middle depth wells proceeded as planned. Fero was able to collect soil samples to 140 fbg. The wells were set with the double pass installation technique described above. The deeper borings presented an issue related to sampling however. Heaving sands below approximately 140 fbg precluded collection of representative formation samples and caused the first of the deep wells (MW5d) to be installed after a separate third pass. Because of the difficulties with this installation, Fero decided to install the northern deep well (MW6d) with a single pass using plugged 10 inch augers and to install a casing with a pre-packed filter from 160 to 170 fbg. This allowed for the installation of a very effective monitoring well however, it did not allow for lithologic sampling below 140 feet.

The monitoring wells were developed during the three days of July 30, 2012 to August 1, 2012. Fero retained BC2 Environmental to develop the wells with a well swab, suction bailer and pump until the wells were free of fines and the turbidity was less than 10 ntu. Consistent with the Approval, Fero retained Dulin and Boynton to survey the new well locations on August 1, 2012. The wells were gauged on August 10, 2012. Table 2 summarizes the depth to groundwater and elevation data.

Semi-annual groundwater monitoring was subsequently conducted at the Site on November 16, 2012, and reported in Fero's *Second Semi-Annual Groundwater Well Monitoring Report 2012, dated February 13, 2013*.

2013 Groundwater Sampling

Fero conducted the first semi-annual monitoring event of 2013 at the CHT site on May 2, 2013 and the second semi-annual monitoring event on October 10, 2013 in conjunction with Cardno's monitoring on the adjacent Jalk Fee site. Prior to pumping any groundwater, Fero measured the depth to groundwater in each of the ten wells on the CHT site. The depth gauging and water elevations in the wells are summarized in Table 2. Note that the groundwater elevation in the water table wells had dropped more than 2 feet from November 16, 2012 to May 2, 2013 and approximately 3.5 additional feet from May 2, 2013 to October 10, 2013. The groundwater elevation in the water table wells has dropped nearly 8 feet since May 3, 2012 and it has nearly returned to the elevations measured during the initial groundwater measurements on March 29, 2011. The well locations are indicated on Figure 1.

The groundwater elevations calculated from data collected on October 10, 2013 in the water table wells, screened from 90 – 110 fbg, were used along with those collected from the similarly screened Jalk Fee wells to determine a generally planar surface which represents the local groundwater table. This surface was superimposed onto the base map attached as Figure 1. The soil type at the slotted section of MW4 is considerably different than the soils located at the screened depths of the other water table wells. The soils contained primarily silt and clay at MW4 and it was sandier at the other well locations. The change in soil may result in less communication with soil profiles at the other wells resulting in an apparent very slight mound at MW4. The resulting slope of the groundwater table indicates a flow direction generally to the south southwest under a gradient of approximately 0.0078 ft/ft.

Likewise the water elevation data from the middle wells, screened from 130 – 140 fbg and the deep wells, screened from 160 – 170 fbg were contoured to determine the respective piezometric surfaces for the middle and deep zones. The resultant contours for the middle well data are provided on Figure 2 and the contours for the deep wells are presented on Figure 3. The general flow direction of the middle zone is to the south under a pressure gradient of 0.0094 ft/ft; very similar to that measured in May 2013. The general flow direction of the deep zone is also to the south with a westerly component on the western portions of the Jalk Fee property. The pressure gradient of the deep zone is approximately 0.0062 ft/ft; lower than that measured in May 2013.

At all clusters, the water in the formations monitored are under pressure with respect to the water in the zones immediately adjacent with a generally upward pressure gradient (+) from the deepest water bearing zone to the water table. The most pronounced upward gradients from the deepest zone to the water table occur in Jalk Fee MW6, MW8 and MW10 clusters with all in the range 0.018 to 0.02 ft/ft and in CHT's MW6 cluster at 0.025 ft/ft. Generally there is an upward gradient from the middle zone to the water table and from the deeper zone to the middle zone.

Exceptions to these upward gradients include a slight downward gradient (-) from MW5s to MW5d at -0.002 ft/ft, a significant downward gradient between MW5s to MW5m of -0.054 ft/ft (there is however a significant upward gradient from MW5d to MW5m of 0.049 ft/ft) and a significant downward gradient in Jalk Fee's cluster MW9 from MW9b to MW9c of -0.056 ft/ft. The occurrence of the flow gradients suggests the formations are not in good communication with one another which further suggests there is significant restriction to flow between the formations and a significant restriction to groundwater migration from the surface to deeper water bearing formations. This inhibits migration of anything migrating with the groundwater.

The historical groundwater elevations in the CHT wells were used to generate hydrographs. The hydrographs are included herein following their respective iso-concentration plot, ie the water table well hydrograph follows Figure 1 as Figure 1a. A hydrograph including all the wells follows the deep well hydrograph after Figure 3 as Figure 3b. The historical groundwater elevations in each well follow one another closely except for the noticeable rise in elevation in MW4 in August 2012 and the noticeable lower in elevation in MW6d in May 2013.

Following gauging and prior to sampling on May 2, 2013, CHT groundwater monitoring wells MW1-3, MW5s, MW5m, MW5d, MW6s, MW6m and MW6d were purged of between 25-45 gallons of water, the volume of which was based upon the volume of freestanding water in the wells and the observed stabilization of physical/chemical parameters during purging. The monitoring wells were purged with a Grundfos variable speed 120-volt AC powered two stage centrifugal Stainless Steel purge pump with discharge through 1/2 inch PVC and Teflon tubing until pH, color, conductivity, and temperature had stabilized. Groundwater was pumped from the monitoring wells at a rate of approximately 1 gallon per minute. Physical and chemical purge monitoring parameters were measured in the field at the discharge line of the pump. Well purging data are attached hereto as Attachment A.

Subsequent to purging each well, the pump rate was reduced to approximately 100 ml/min whereupon a representative sample of groundwater was collected from the discharge line using 40 ml.

glass sample vials. Teflon lined caps were secured tightly onto the 40 ml vials and each was visually inspected to assure that zero headspace had been achieved. The sample vials containing groundwater from each well were immediately placed in an ice chest containing ice and transported for analysis to Enviro-Chem, Inc. in Pomona accompanied by appropriate Chain-of-Custody documentation.

Due to the difficulty of pumping MW4, it was bailed dry using a clean bailer (approximately 5 gallons), then a sample was collected using a new sampling bailer. As indicated above, Teflon lined caps were secured tightly onto the 40 ml vials and each was visually inspected to assure that zero headspace had been achieved. The sample vials containing groundwater from the well were immediately placed in an ice chest containing ice and transported at the end of the sampling day for analysis to Enviro-Chem, Inc. in Pomona accompanied by appropriate Chain-of-Custody documentation.

The groundwater samples were analyzed for Volatile Organic Compounds (VOCs) using EPA Method 8260B. Groundwater VOC analytical results from this and from previous events are summarized in Table 3. Lab analytical reports with associated chain-of-custody documentation are included in Attachment B. Data requested by the EPA were presented in EPA format and have been submitted under separate cover. Comparable groundwater quality data generated concurrently by Cardno ERI for this sampling event are presented in Table 4.

Groundwater from the well purging activities was contained in DOT approved drums onsite, appropriately profiled, and accepted by DeMenno Kerdoon in Compton, California for treatment. The groundwater was transported to DeMenno Kerdoon in Compton, California for treatment on October 28, 2013.

The CHT and Jalk Fee PCE and TCE data collected from this groundwater sampling event were contoured to generate iso-concentration contours for the respective water table, middle and deep well locations. These contours were superimposed onto the plot map in Figures 4-9. The historical concentration data were plotted with time for the three depths monitored and are presented as the hydrographs following their respective iso-concentration contour plots as Figures 4a to 9a. Plots of all well PCE and TCE concentrations follow Figures 6 & 9 as Figures 6b & 9b, respectively. The concentrations of PCE and TCE are generally decreasing with time in the CHT wells.

During the period of groundwater monitoring, March 2011 to October 2013, the groundwater flow direction in all of the zones monitored has consistently flowed to the south or south-southwest from the Jalk Fee site onto the CHT site. During this monitoring event, the highest concentration of PCE in the water table wells occurred at Jalk Fee wells MW9a (196 µg/L), MW6a (188 µg/L) and MW5 (169 µg/L) followed by downgradient CHT wells MW6s (168 µg/L) and MW2 (159 µg/L). The highest PCE concentrations in the middle depth wells occurred at Jalk Fee well MW6m (641 µg/L) followed by downgradient CHT wells MW6m (152 µg/L) and MW5m (124 µg/L). The highest PCE concentrations in the deep wells occurred at Jalk Fee well MW6c (359 µg/L) followed by downgradient CHT wells MW6d (9.84 µg/L) and MW5d (3.40 µg/L). The highest TCE concentrations are very similar in Jalk Fee well MW6a (123 µg/L) and downgradient CHT wells MW2 (139 µg/L), MW1 (129 µg/L) and MW5s (132 µg/L). The highest TCE concentration in the middle depth wells occurs at Jalk Fee well MW6a (167 µg/L) followed by downgradient CHT well

MW5m (118 µg/L). Finally, the highest TCE in the deep wells occurs at CHT well MW6d (146 µg/L) followed by upgradient Jalk Fee well MW6c (68.3 µg/L). The data and contours suggest the Jalk Fee site is the source of the PCE proximate to the former excavations conducted north of and immediately upgradient of the CHT site and that the PCE has migrated onto the CHT site. Likewise, the TCE is likely a degradation byproduct from the PCE that migrates onto the CHT site with groundwater flow.

Except for the Jalk Fee well cluster MW6 on the Jalk Fee site, the PCE concentrations decreased significantly from the water table to the deep zone monitored. Likewise, except for the Jalk Fee well cluster MW8 and on the Jalk Fee site and CHT well cluster MW6 immediately downgradient of the Jalk Fee site, the TCE concentrations decreased from the water table to the deepest zone monitored.

The next semi-annual sampling event will likely occur sometime during May 2014. Fero will again coordinate the sampling event with the Cardno ERI, consultants for the adjacent Jalk Fee site. Should you have any questions regarding the content of this Semi-Annual Groundwater Monitoring Report, please do not hesitate to call the undersigned at (714) 256-2737.

Respectfully,
Fero Environmental Engineering, Inc.

Rick L. Fero,
President



RLF: jbp
[758wellmon1013]

cc Mr. James Stull (via E-mail Only)
Michael A Francis, Esq. (Via E-mail Only)
Mr. Robert Schneider (Via E-mail Only)

Table 1
Well and Probe Schedule
Continental Heat Treat

well/probe No.	MW-1	MW-2	MW-3	MW-4	MW-5s	MW-5m	MW-5d	MW-6s	MW-6m
installation date	8/3/2010	8/4/2010	8/5/2010	10/24/2011	7/9/2012	7/10/2012	7/11/2012	7/19/2012	7/20/2012
elevation (ft MSL)	137.08	138.04	137.73	137.55	137.49	137.37	137.54	137.84	137.95
depth of boring (ft)	120	120	120	117	110	140	170	110	140
casing diameter (in)	2	2	2	4	4	4	4	4	4
depth to top of screen (ft)	90	90	90	90	90	130	160	20	130
depth to bottom of screen (ft)	120	120	120	117	110	140	170	110	140
vapor probe depths (ft)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	30
									60
									90
	MW-6d	FVP1	FVp2	FVP3	FVP4	FNP19	FNP20	FNP21	FNP22
installation date	7/24/2012	10/19/2011	10/26/2011	10/20/2011	10/21/2011	7/16/2012	7/17/2012	7/18/2012	7/23/2012
elevation (ft MSL)	138.01	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
depth of boring (ft)	170	90	90	90	90	85	85	85	85
casing diameter (in)	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
depth to top of screen (ft)	160	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
depth to bottom of screen (ft)	170	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
vapor probe depths (ft)	n/a	5	5	5	5	5	5	5	5
		15	15	15	15	15	15	15	15
		30	30	30	30	30	30	30	30
		60	60	60	60	60	60	60	60
		90	90	90	90	85	85	85	85

Table 2
Summary of Groundwater Elevation
Continental Heat Treating
10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)

Well Number	Date	TOC Elevation (ft MSL)	Depth to Groundwater (ft)	Groundwater Elevation (ft MSL)
MW1	3/29/11	137.07	97.16	39.91
	6/15/11		94.50	42.57
	9/20/11		91.81	45.26
	12/23/11	137.08	90.13	46.95
	5/3/12		88.46	48.62
	8/10/12		88.71	48.37
	11/16/12		90.28	46.80
	5/2/13		92.56	44.52
	10/10/13		96.24	40.84
MW2	3/29/11	137.43	96.45	40.98
	6/15/11		93.74	43.69
	9/20/11		91.06	46.37
	12/23/11	138.04	90.05	47.99
	5/3/12		88.43	49.61
	8/10/12		88.65	49.39
	11/16/12		90.13	47.91
	5/2/13		92.48	45.56
	10/10/13		96.09	41.95
MW3	3/29/11	137.71	96.42	41.29
	6/15/11		93.94	43.77
	9/20/11		91.12	46.59
	12/23/11	137.03	89.43	47.60
	5/3/12		87.69	49.34
	8/10/12		87.80	49.23
	11/16/12		89.16	47.87
	5/2/13		91.41	45.62
	10/10/13		94.84	42.19
MW4	12/23/11	137.55	89.43	48.12
	5/3/12		87.69	49.86
	8/10/12		86.37	51.18
	11/16/12		89.25	48.30
	5/2/13		91.47	46.08
	10/10/13		94.81	42.74
MW5s	8/10/12	137.49	88.85	48.64
	11/16/12		90.23	47.26
	5/2/13		92.46	45.03
	10/10/13		95.97	41.52
MW5m	8/10/12	137.37	89.49	47.88
	11/16/12		91.00	46.37
	5/2/13		93.24	44.13
	10/10/13		96.92	40.45

Table 2
Summary of Groundwater Elevation
Continental Heat Treating
10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)

Well Number	Date	TOC Elevation (ft MSL)	Depth to Groundwater (ft)	Groundwater Elevation (ft MSL)
MW5d	8/10/12	137.54	88.79	48.75
	11/16/12		90.26	47.28
	5/2/13		92.51	45.03
	10/10/13		96.12	41.42
MW6s	8/10/12	137.84	88.41	49.43
	11/16/12		89.89	47.95
	5/2/13		92.21	45.63
	10/10/13		95.84	42.00
MW6m	8/10/12	137.95	88.08	49.87
	11/16/12		89.68	48.27
	5/2/13		91.95	46.00
	10/10/13		95.56	42.39
MW6d	8/10/12	138.01	87.26	50.75
	11/16/12		88.78	49.23
	5/2/13		95.56	42.45
	10/10/13		94.74	43.27

Table 3
Summary of Groundwater Analyses
Continental Heat Treating
10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)
(µg/L)

Well	Date	Ben	Chl	1,4- DCB	1,1- DCA	cis-1,2- DCE	trans-1,2- DCE	1,2- DCA	1,1- DCE	HCB	NAP	1,1,2,2- TCA	PCE	1,2,3- TCB	1,2,4- TCB	TCE	TCFM	VC
MW1	8/20/10	ND	0.97	ND	17.3	12.2	ND	113	224	ND	ND	ND	184	ND	ND	154	2.79	5.96
	3/29/11	ND	1.02	ND	17.7	600	14.9	ND	184	ND	ND	ND	210	ND	ND	170	5.54	27.8
	6/15/11	ND	1.50	ND	14.1	85.1	2.06	ND	117	ND	ND	ND	228	ND	ND	167	5.51	3.13
	9/23/11	ND	4.20	ND	25.3	118	2.14	ND	191	ND	ND	ND	182	ND	ND	164	13.2	3.50
	12/23/11	ND	3.33	ND	16.3	147	1.92	2.66	85.3	ND	1.90	ND	201	ND	ND	164	6.74	1.51
	5/3/12	ND	6.15	ND	32.2	433	6.80	4.96	191	ND	ND	ND	196	ND	ND	224	13.6	10.0
	11/16/12	ND	5.98	ND	28.6	191	5.75	4.96	139	ND	ND	ND	197	ND	ND	158	6.24	11.0
	5/2/13	ND	5.45	ND	18.5	95.3	2.68	4.21	96.5	ND	ND	ND	151	ND	ND	135	7.78	12.3
	10/10/13	ND	3.85	ND	11.9	101	8.51	2.54	78.0	ND	ND	ND	128	ND	ND	129	4.11	7.35
MW2	8/20/10	ND	1.71	0.78	21.8	59.6	0.76	5.43	126	1.14	2.47	0.92	235	2.72	1.24	178	9.49	0.89
	3/29/11	ND	1.89	ND	22.8	55.1	ND	2.74	161	1.14	ND	ND	214	ND	ND	158	10.0	0.53
	6/15/11	ND	3.07	ND	24.2	85.3	1.53	4.83	149	ND	ND	ND	338	ND	ND	172	13.1	3.09
	9/23/11	ND	5.08	ND	28.1	100	2.09	5.88	177	ND	ND	ND	245	ND	ND	161	21.3	4.01
	12/23/11	ND	3.66	ND	18.3	53.0	0.65	2.69	77.6	NC	ND	ND	252	ND	ND	148	10/6	ND
	5/3/12	ND	8.72	ND	41.9	92.8	0.54	5.21	194	ND	ND	ND	177	ND	ND	163	24.2	ND
	11/16/12	ND	21.7	ND	59.7	160	6.61	11.6	369	ND	ND	ND	138	ND	ND	121	40.0	ND
	5/2/13	ND	10.9	ND	17.1	66.6	ND	3.75	87.0	ND	ND	ND	233	ND	ND	139	24.4	ND
	10/10/13	ND	ND	ND	69.6	38.8	ND	ND	ND	ND	ND	ND	159	ND	ND	119	ND	ND
MW3	8/20/10	4.50	ND	ND	6.19	38.9	4.13	ND	57.1	1.18	2.43	ND	56.9	3.26	1.29	160	1.22	ND
	3/29/11	3.17	ND	ND	11.7	49.0	4.41	ND	185	ND	ND	ND	82.2	ND	ND	200	4.75	3.78
	6/15/11	1.01	0.91	ND	12.1	41.8	11.2	ND	124	ND	ND	ND	151	ND	ND	149	5.26	1.71
	9/23/11	ND	1.30	ND	14.3	43.6	13.6	ND	146	ND	ND	ND	120	ND	ND	130	7.45	1.32
	12/23/11	ND	1.61	ND	9.57	32.6	8.33	ND	62.1	ND	ND	ND	143	ND	ND	133	5.33	ND
	5/3/12	ND	5.81	ND	25.4	77.8	15.7	0.65	190	ND	ND	ND	137	ND	ND	165	13.3	1.35
	11/16/12	3.59	4.82	ND	15.1	60.1	11.7	ND	104	ND	ND	ND	94	ND	ND	140	7.76	ND
	5/2/13	7.05	2.70	ND	9.26	59.6	16.8	ND	70.7	ND	ND	ND	89.3	ND	ND	85.9	2.50	6.18
	10/10/13	ND	3.21	ND	7.68	73.9	13.0	ND	69.9	ND	ND	ND	79.0	ND	ND	77.9	3.00	5.70
MW4	12/23/11	ND	0.54	ND	3.61	172	5.47	ND	16.9	ND	3.05	ND	36.0	ND	ND	21.9	ND	8.20
	1/10/12	ND	ND	ND	5.08	62.2	2.88	ND	25.6	ND	3.22	ND	70.1	ND	ND	47.5	ND	3.51
	5/3/12	ND	2.29	ND	20.9	284	9.63	0.54	148	ND	ND	ND	93.0	ND	ND	90.3	3.51	18.5
	11/16/12	ND	10.0	ND	43.7	424	20.7	ND	308	ND	ND	ND	94.2	ND	ND	95.2	ND	66.7
	5/2/13	ND	4.67	ND	10.7	215	8.95	ND	56.3	ND	ND	ND	118	ND	ND	80.3	2.89	45.8
	10/10/13	ND	2.56	ND	9.71	454	23.0	ND	77.7	ND	ND	ND	82.6	ND	ND	70.7	ND	74.4

Table 3 (cont.)
Summary of Groundwater Analyses
Continental Heat Treating
10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)
(µg/L)

Well	Date	Ben	Chl	1,4- DCB	1,1- DCA	cis-1,2- DCE	t-1,2- DCE	1,2- DCA	1,1- DCE	HCB	NAP	1,1,2,2- TCA	PCE	1,2,3- TCB	1,2,4- TCB	TCE	TCFM	VC
MW5s	11/16/12	ND	4.73	ND	26.8	76.3	3.71	ND	163	ND	ND	ND	110	ND	ND	154	ND	2.36
	5/2/13	ND	4.02	ND	16.0	77.3	10.2	ND	116	ND	ND	ND	117	ND	ND	165	10.2	23.1
	10/10/13	ND	3.75	ND	11.1	56.1	8.06	ND	74.2	ND	ND	ND	118	ND	ND	132	ND	ND
MW5m	11/16/12	ND	4.32	ND	42.3	104	ND	8.69	448	ND	ND	ND	102	ND	ND	132	ND	ND
	5/2/13	ND	3.42	ND	15.9	38.3	ND	3.30	153	ND	ND	ND	170	ND	ND	180	4.71	ND
	10/10/13	ND	ND	ND	8.75	22.5	ND	ND	72.5	ND	ND	ND	124	ND	ND	118	ND	ND
MW5d	11/16/12	ND	ND	ND	7.0	35.1	1.43	1.21	90.2	ND	ND	ND	9.42	ND	ND	44.4	ND	ND
	5/2/13	ND	ND	ND	6.48	37.7	1.97	1.07	76.1	ND	ND	ND	3.29	ND	ND	46.9	ND	ND
	10/10/13	ND	ND	ND	5.89	32.0	2.39	ND	60.0	ND	ND	ND	3.40	ND	ND	42.4	ND	ND
MW6s	11/16/12	ND	12.3	ND	31.7	137	4.53	4.85	182	ND	ND	ND	195	ND	ND	153	17.4	8.73
	5/2/13	ND	10.0	ND	19.2	178	3.16	4.75	87.6	ND	ND	ND	181	ND	ND	128	19.0	21.4
	10/10/13	ND	5.13	ND	13.0	117	5.21	2.26	70.0	ND	ND	ND	168	ND	ND	103	9.44	7.49
MW6m	11/16/12	ND	6.34	ND	30.0	74.3	ND	7.90	195	ND	ND	ND	171	ND	ND	150	4.40	ND
	5/2/13	ND	8.39	ND	21.0	49.4	ND	4.87	112	ND	ND	ND	208	ND	ND	146	8.64	ND
	10/10/13	ND	5.33	ND	12.9	35.4	12.7	ND	91.7	ND	ND	ND	152	ND	ND	87.9	8.07	ND
MW6d	11/16/12	ND	ND	ND	12.7	68.2	1.09	3.79	166	ND	ND	ND	12.8	ND	ND	140	ND	ND
	5/2/13	ND	ND	ND	11.2	71.7	0.66	2.49	172	ND	ND	ND	14.2	ND	ND	167	ND	ND
	10/10/13	ND	ND	ND	11.3	55.5	ND	2.26	143	ND	ND	ND	9.84	ND	ND	146	ND	ND

DL – detection limit, ND = Not Detected at DL , Ben - Benzene, Chl - Chloroform, DCB - Dichlorobenzene, DCA – Dichloroethane, DCE – Dichloroethene, HCB – Hexachlorobutadiene, NAP – Naphalene, TCA – _____
Tetrachloroethane, PCE – Tetrachloroethene, TCB – Trichlorobenzene, TCE – Trichloroethene, TCFM – Trichlorofluoromethane , VC – Vinyl Chloride

Table 3 (cont.)
Summary of Groundwater Analyses
Continental Heat Treating
10643 Norwalk Boulevard, Santa Fe Springs, California
(Site Id. No. 204GW00, SCP No. 1057)
(µg/L)

Well	Date	Toluene	Sec-BBen	Ethyl Ben	IPB	4 IPT	n PBen	1,2,4-TMB	Xylene	111TCA	Freon-113
MW1	12/23/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/3/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.1
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.0
MW2	12/23/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/3/12	ND	ND	ND	ND	ND	ND	ND	ND	1.14	--
	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	38.6
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	12/23/11	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/3/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	13.1
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.1
MW4	12/23/11	1.50	3.72	1.42	7.02	0.65	7.03	ND	ND	ND	--
	1/10/12	ND	2.71	1.61	6.04	ND	6.30	1.31	1.20	ND	--
	5/3/12	ND	2.18	1.41	4.14	ND	3.17	ND	ND	ND	--
	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.0
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.8
MW5s	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	21.3
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.3
MW5m	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	18.7
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	11.1
MW5d	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW6s	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	0.88	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	27.4
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	16.4
MW6m	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	24.7
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW6d	11/16/12	ND	ND	ND	ND	ND	ND	ND	ND	ND	--
	5/2/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/10/13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DL – detection limit, ND = Not Detected at DL , sec-BBen – sec-Butylbenzene, EthylBen – Ethylbenzene, IPB - Isopropylbenzene,
4 IPT – 4- Isopropyltoluene, n PBen – n-Propylbenzene, 1,2,4-Trimethylbenzene, 1,1,1 Trichloroethane

Table 4
Summary of Groundwater Analyses
Former Exxon/Mobil Jalk Fee Property
10607 Norwalk Boulevard, Santa Fe Springs, California
(CRWQCB-LAR Case No. 0203, I.D. No. 1848000))
(µg/L)

Well	Date	Benzene	Chloroform	1,1-DCA	cis-1,2-DCE	1,1-DCE	111-TCA	Freon-113	PCE	1,2,4-TCB	TCE	TCFM	VC
MW5	5/2/13	ND	10.5	26.5	53.6	130	0.536	49.2	161	ND	124	23.2	ND
	10/10/13	ND	8.42	15.7	36.9	92.7	ND	45.6	169	ND	118	17.6	ND
MW6a	5/1/13	ND	10.9	30.6	67.6	140	0.656	37.3	182	ND	125	19.3	ND
	10/9/13	ND	9.59	23.0	51.8	119	ND	38.2	188	ND	123	16.4	ND
MW6b	5/1/13	0.552	ND	26.0	347	104	ND	1.55	1650	ND	322	ND	5.42
	10/9/13	ND	0.519	20.3	355	73.8	ND	1.84	641	ND	167	ND	13.4
MW6c	5/1/13	ND	ND	18.5	58.7	125	ND	ND	69.2	ND	101	ND	13.4
	10/9/13	ND	ND	11.3	70.1	39.3	ND	ND	359	ND	68.3	ND	8.01
MW7a	5/1/13	ND	10.3	21.5	47.6	101	ND	30.6	124	ND	106	15.4	ND
	10/10/13	ND	5.20	12.8	32.8	70.8	ND	17.1	89.9	ND	92.9	7.99	0.738
MW7b	5/1/13	ND	2.63	25.2	149	77.3	ND	5.61	37.1	ND	27.0	1.62	ND
	10/10/13	ND	3.33	14.0	37.3	80.8	ND	20.5	100	ND	109	5.19	ND
MW7c	5/1/13	ND	ND	1.59	5.98	8.80	ND	ND	6.95	ND	5.38	ND	ND
	10/10/13	ND	ND	1.42	5.30	9.87	ND	ND	7.56	ND	7.85	ND	ND
MW8a	5/2/13	1.61	ND	11.9	21.6	21.8	ND	1.12	21.4	0.610	46.2	ND	30.6
	10/10/13	0.633	ND	8.60	5.35	19.2	ND	1.18	9.10	ND	43.4	ND	26.8
MW8b	5/2/13	ND	ND	4.72	42.0	65.9	ND	ND	7.64	ND	132	ND	4.77
	10/10/13	ND	ND	3.79	80.6	53.7	ND	ND	4.38	ND	37.7	ND	18.2
MW8c	5/2/13	0.66	ND	5.31	77.3	63.7	ND	ND	4.80	ND	75.8	ND	6.5
	10/10/13	ND	ND	2.42	37.1	42.9	ND	ND	8.63	ND	77.6	ND	13.2

Table 4 (cont.)
Summary of Groundwater Analyses
Former Exxon/Mobil Jalk Fee Property
10607 Norwalk Boulevard, Santa Fe Springs, California
(CRWQCB-LAR Case No. 0203, I.D. No. 1848000))
(µg/L)

Well	Date	Benzene	Chloroform	1,1-DCA	cis-1,2-DCE	1,1-DCE	111-TCA	Freon-113	PCE	1,2,4-TCB	TCE	TCFM	VC
MW9a	5/2/13	ND	9.88	32.9	65.1	138	0.886	32.3	192	ND	116	20.1	ND
	10/9/13	ND	7.59	19.8	426	76.5	ND	27.2	196	ND	93.3	12.6	ND
MW9b	5/2/13	ND	0.897	24.6	115	119	ND	3.38	161	ND	60.5	ND	0.565
	10/9/13	ND	0.734	21.5	112	97.8	ND	3.64	94.4	ND	111	0.501	1.71
MW9c	5/2/13	ND	ND	5.59	50.1	38.2	ND	ND	7.04	ND	3.83	ND	2.38
	10/9/13	ND	ND	8.50	51.8	42.2	ND	ND	7.41	ND	2.26	ND	20.2
MW10a	5/1/13	ND	11.0	22.9	50.9	120	ND	47.8	154	ND	123	20.8	ND
	10/10/13	ND	6.33	13.5	39.8	89.2	ND	31.3	141	ND	103	12.1	ND
MW10b	5/1/13	ND	4.22	24.6	87.8	118	ND	17.0	111	ND	87.8	3.02	ND
	10/10/13	ND	2.97	17.4	79.5	117	ND	12.9	98.3	ND	91.9	1.79	ND
MW10c	5/1/13	ND	ND	8.26	100	86.6	ND	ND	87.2	ND	14.1	ND	1.10
	10/10/13	ND	ND	5.76	105	49.6	ND	ND	29.0	ND	4.99	ND	16.4

DL – detection limit, ND = Not Detected at DL , Ben - Benzene, Chl - Chloroform, DCB - Dichlorobenzene, DCA – Dichloroethane, DCE – Dichlorethene, HCB – Hexachlorobutadiene, NAP – Naphalene, TCA – _____
Tetrachloroethane, PCE – Tetrachloroethene, TCB – Trichlorobenzene, TCE – Trichloroethene, TCFM – Trichlorofluoromethane , VC – Vinyl Chloride

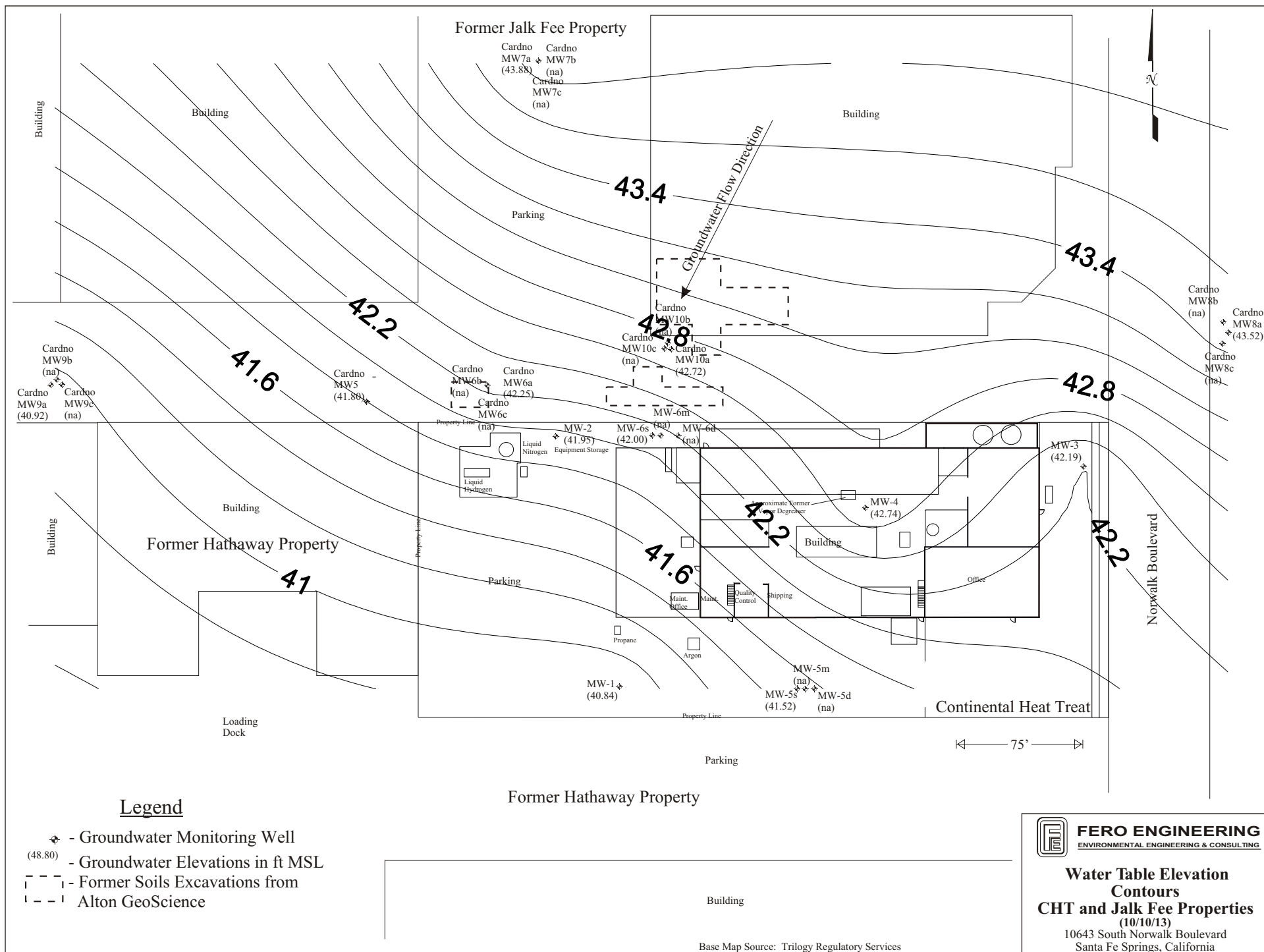
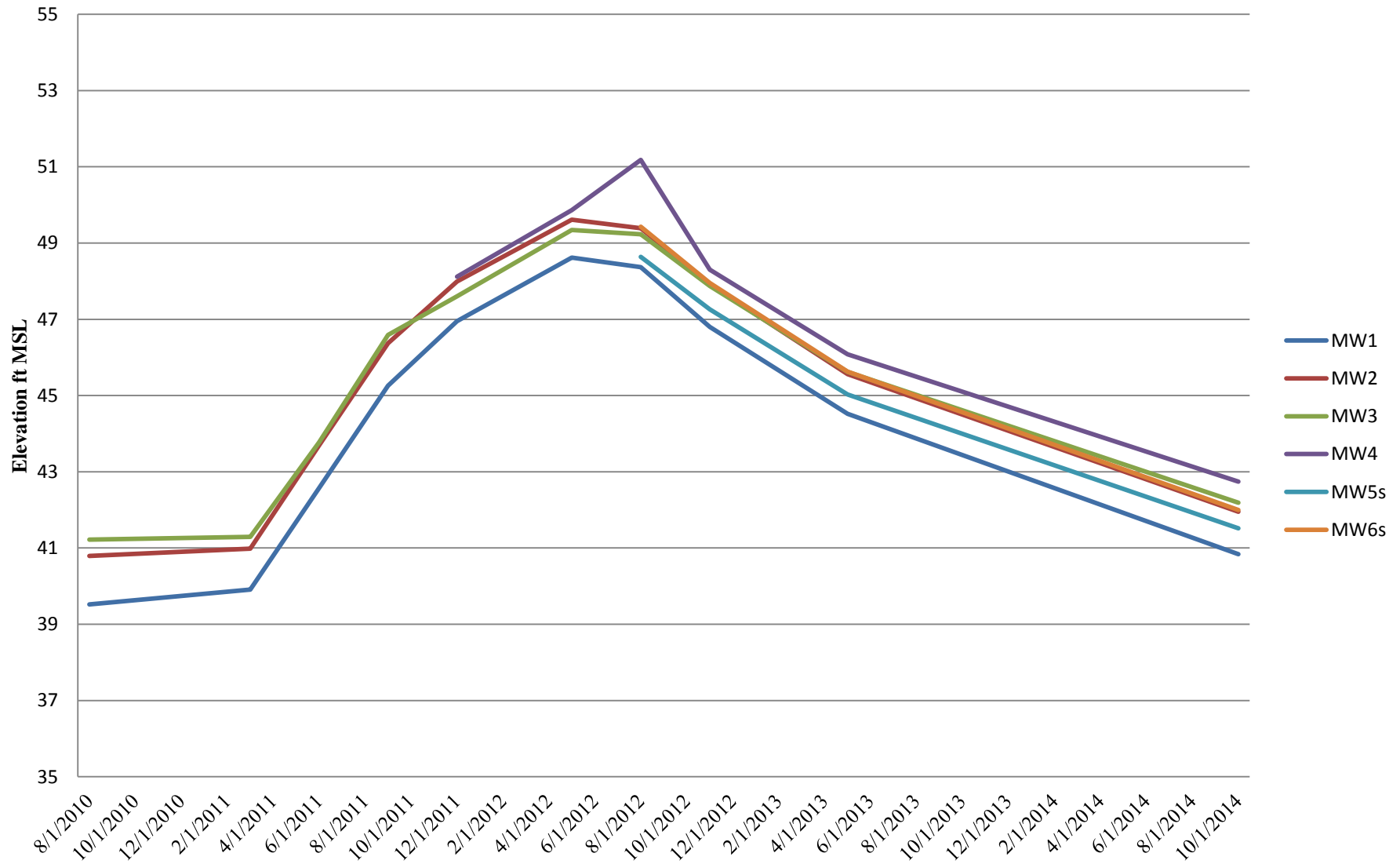
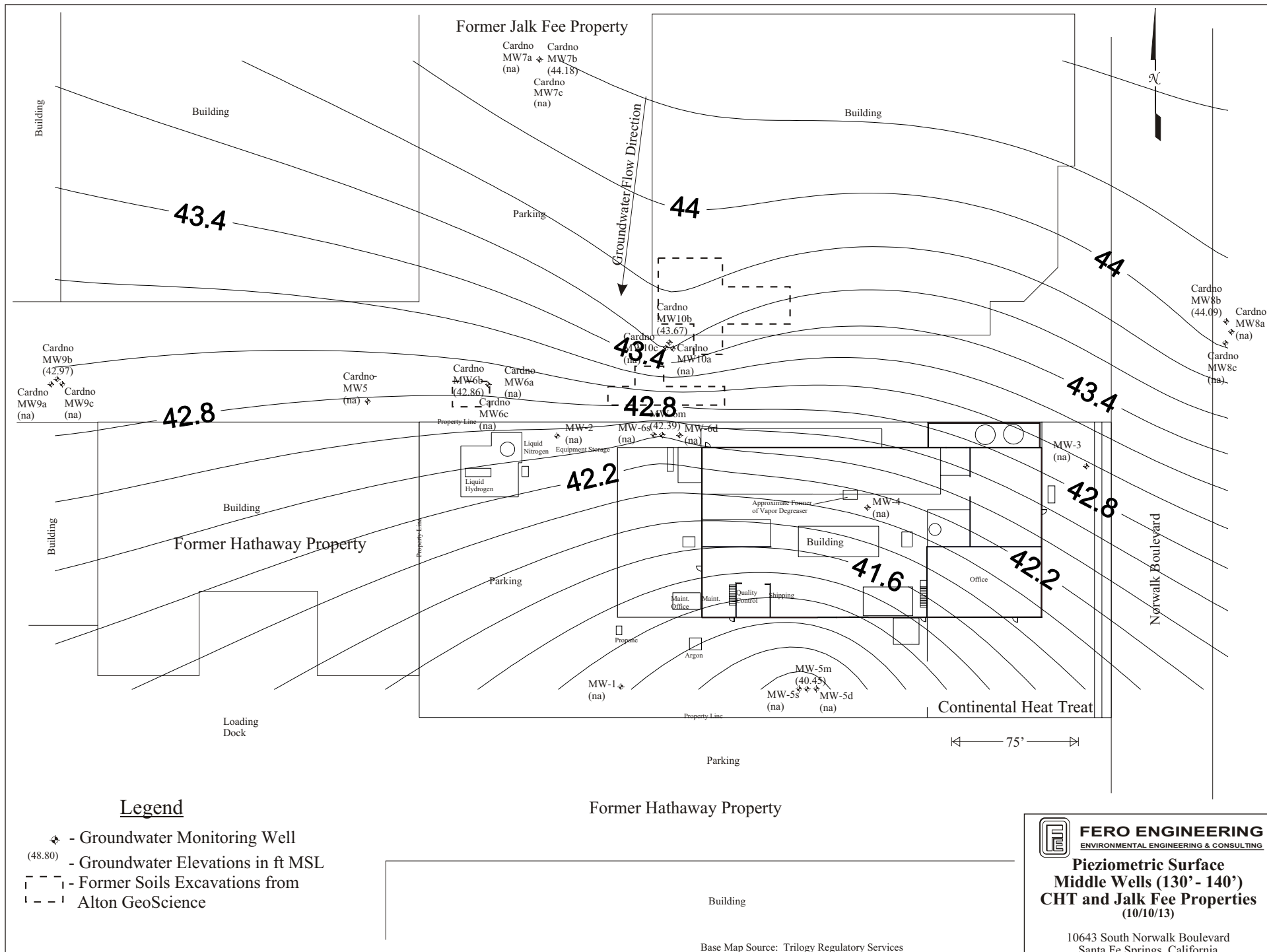


Figure 1

**Well Hydrographs Watertable Wells
Continental Heat Treat
Figure 1a**





Legend

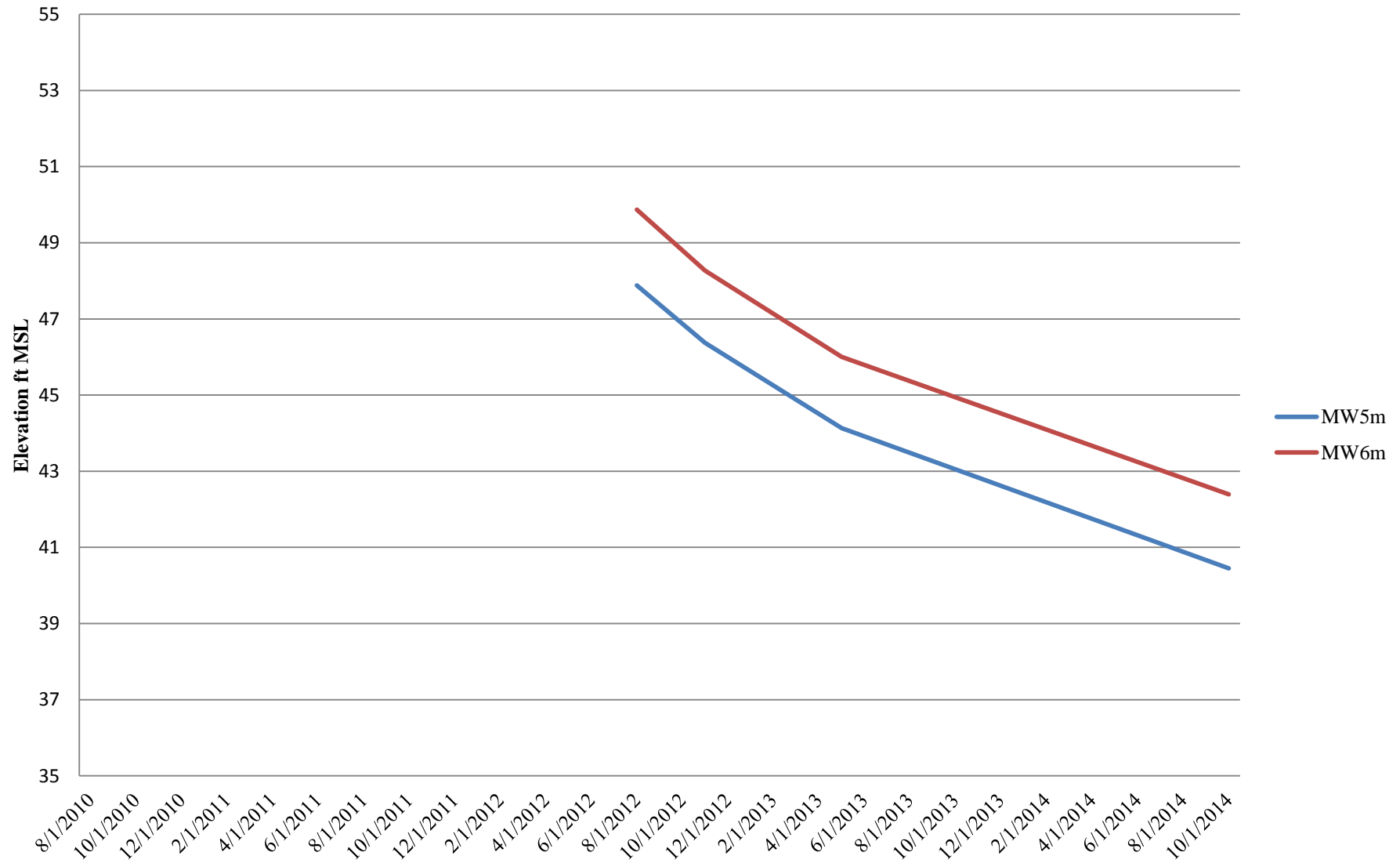
- ◆ - Groundwater Monitoring Well
- (48.80) - Groundwater Elevations in ft MSL
- - - - - Former Soils Excavations from Alton GeoScience

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ENVIRONMENTAL ENGINEERING & CONSULTING

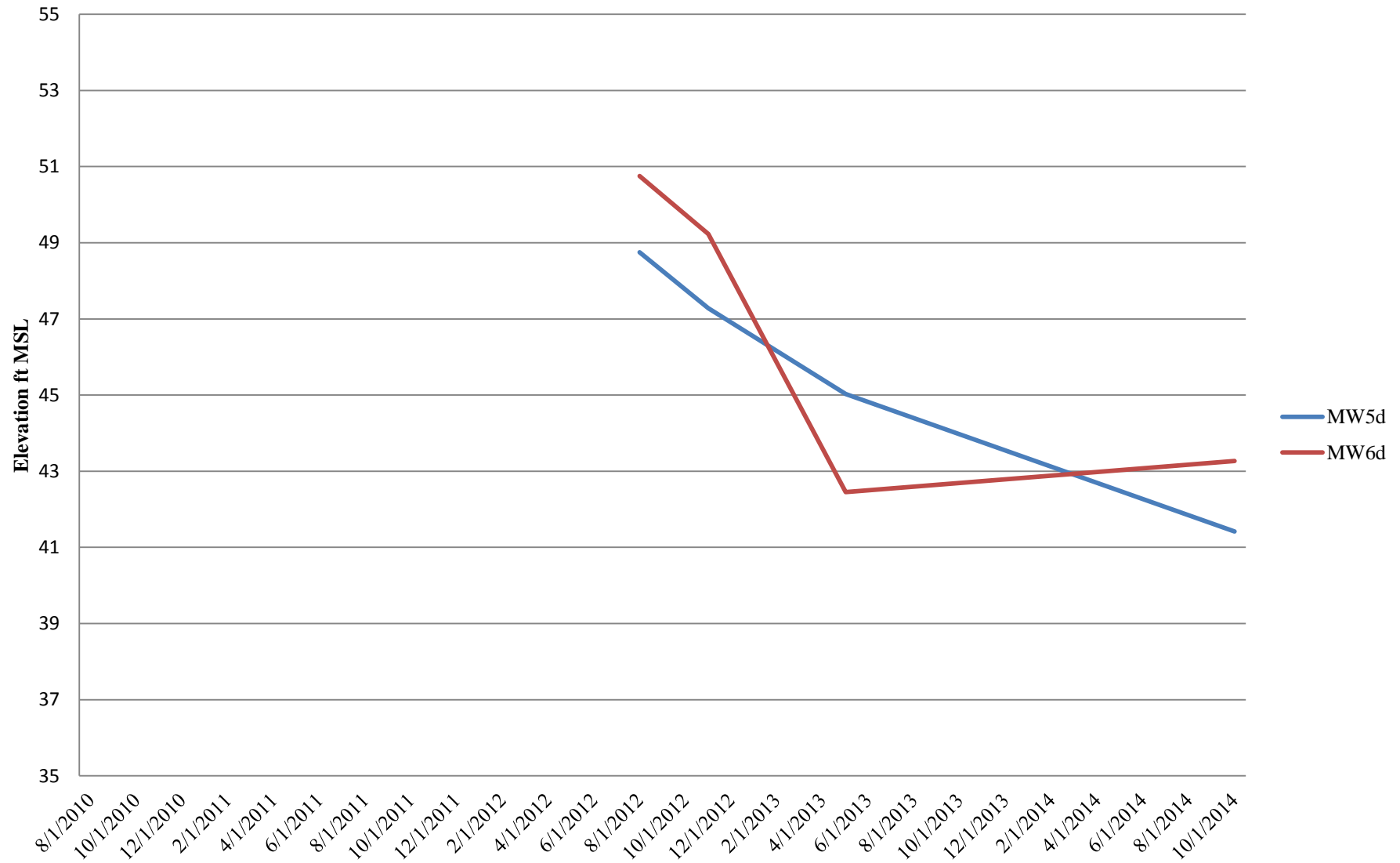
**Pieziometric Surface
Middle Wells (130' - 140')
CHT and Jalk Fee Properties
(10/10/13)**

10643 South Norwalk Boulevard
Santa Fe Springs, California

**Well Hydrographs Middle Wells
Continental Heat Treat
Figure 2a**



**Well Hydrographs Deep Wells
Continental Heat Treat
Figure 3a**



**Well Hydrographs All Wells
Continental Heat Treat
Figure 3b**

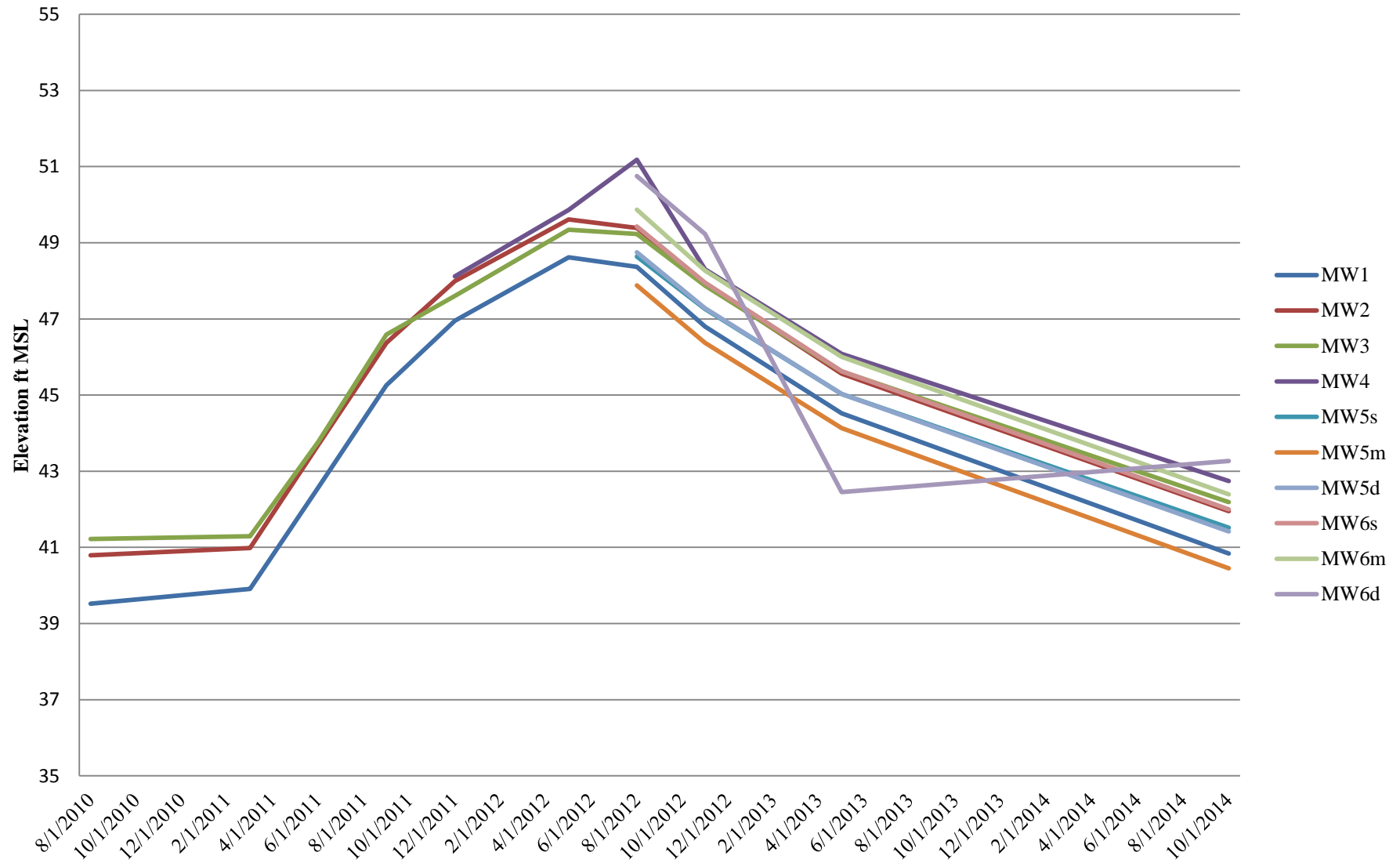
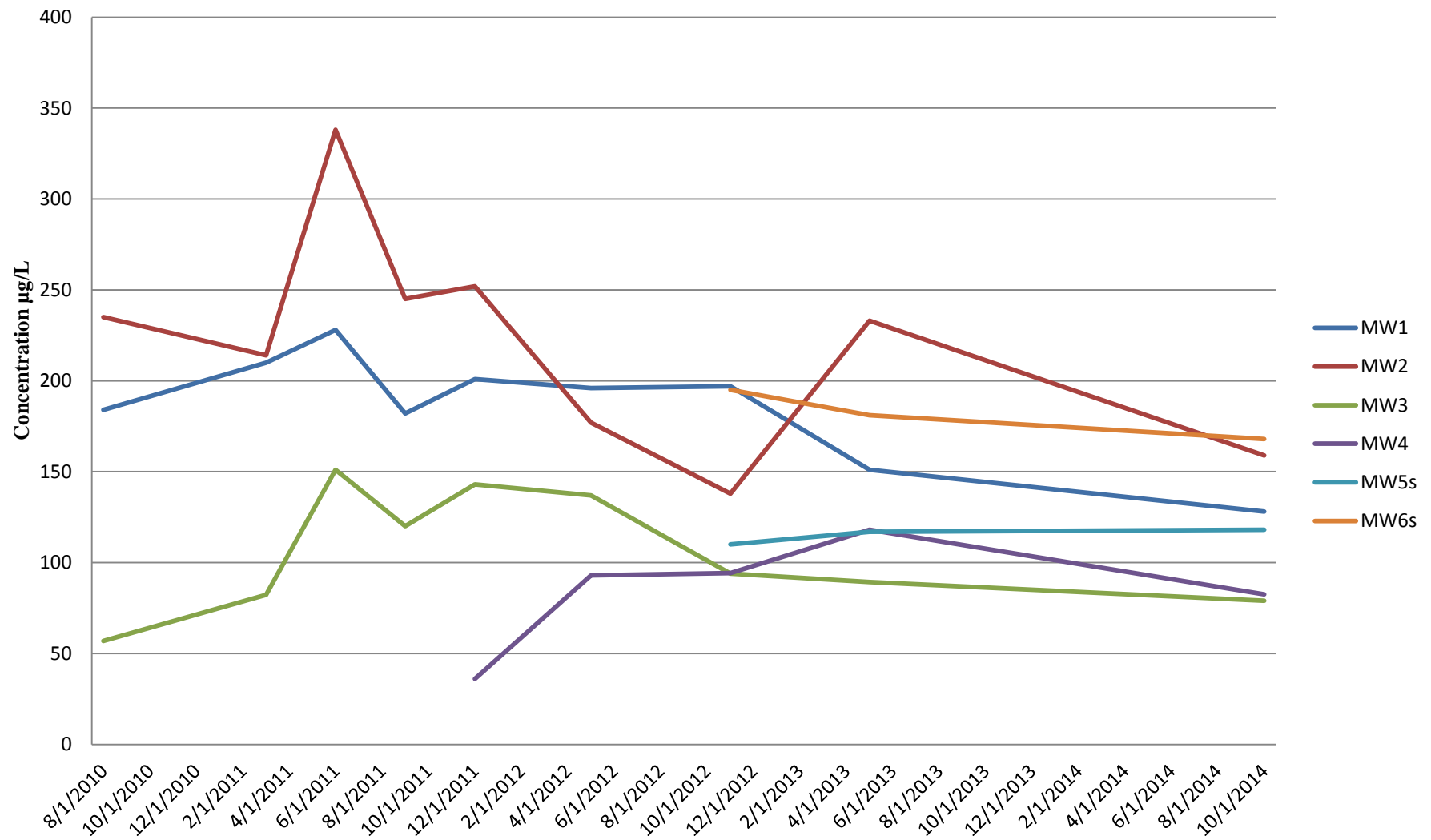
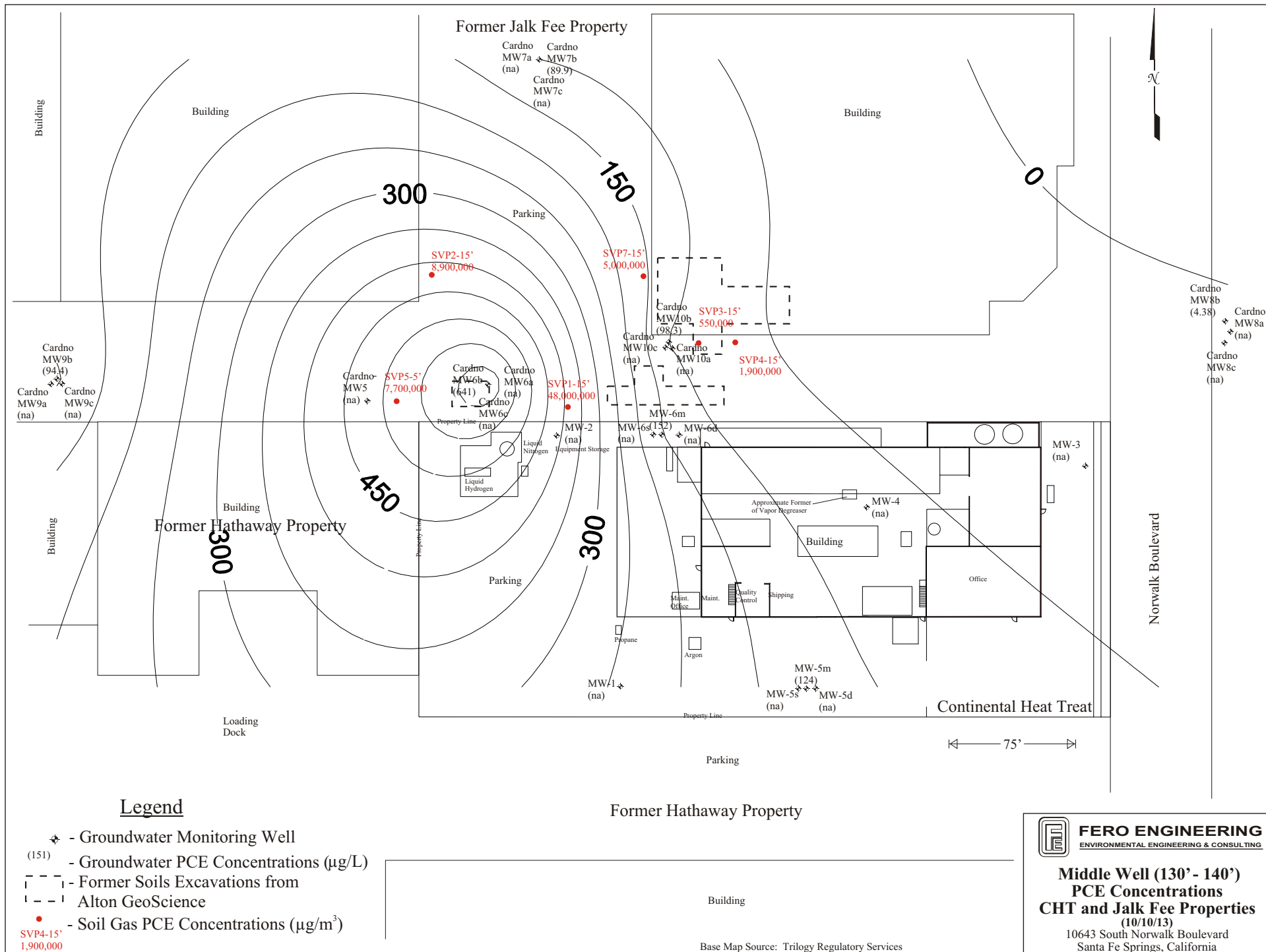




Figure 4

PCE Groundwater Concentrations vs Time
Watertable Wells
Continental Heat Treat
Figure 4a





[758midwelPCE1013a]

Figure 5

PCE Groundwater Concentrations vs Time
Middle Wells
Continental Heat Treat
Figure 5a

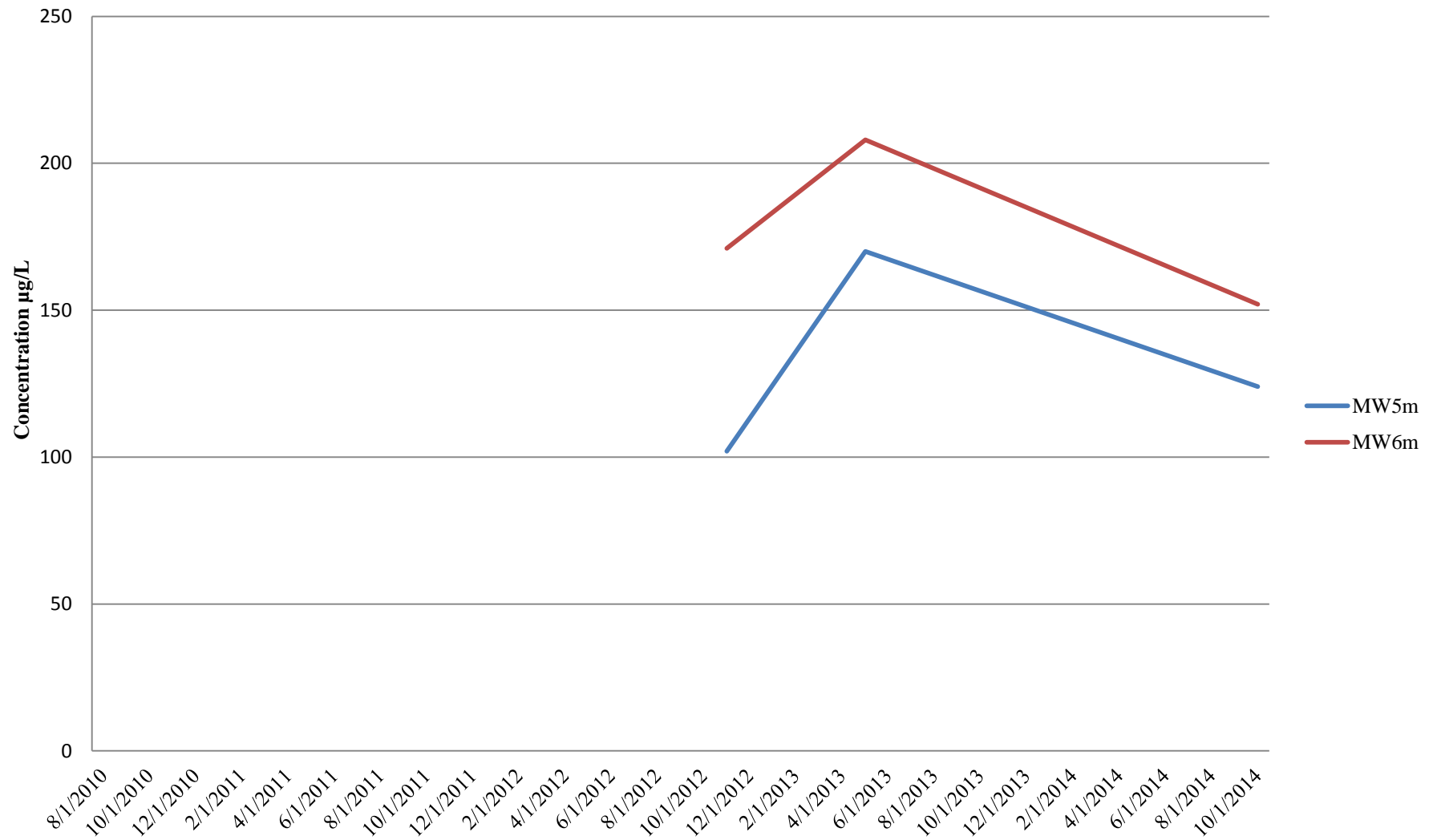


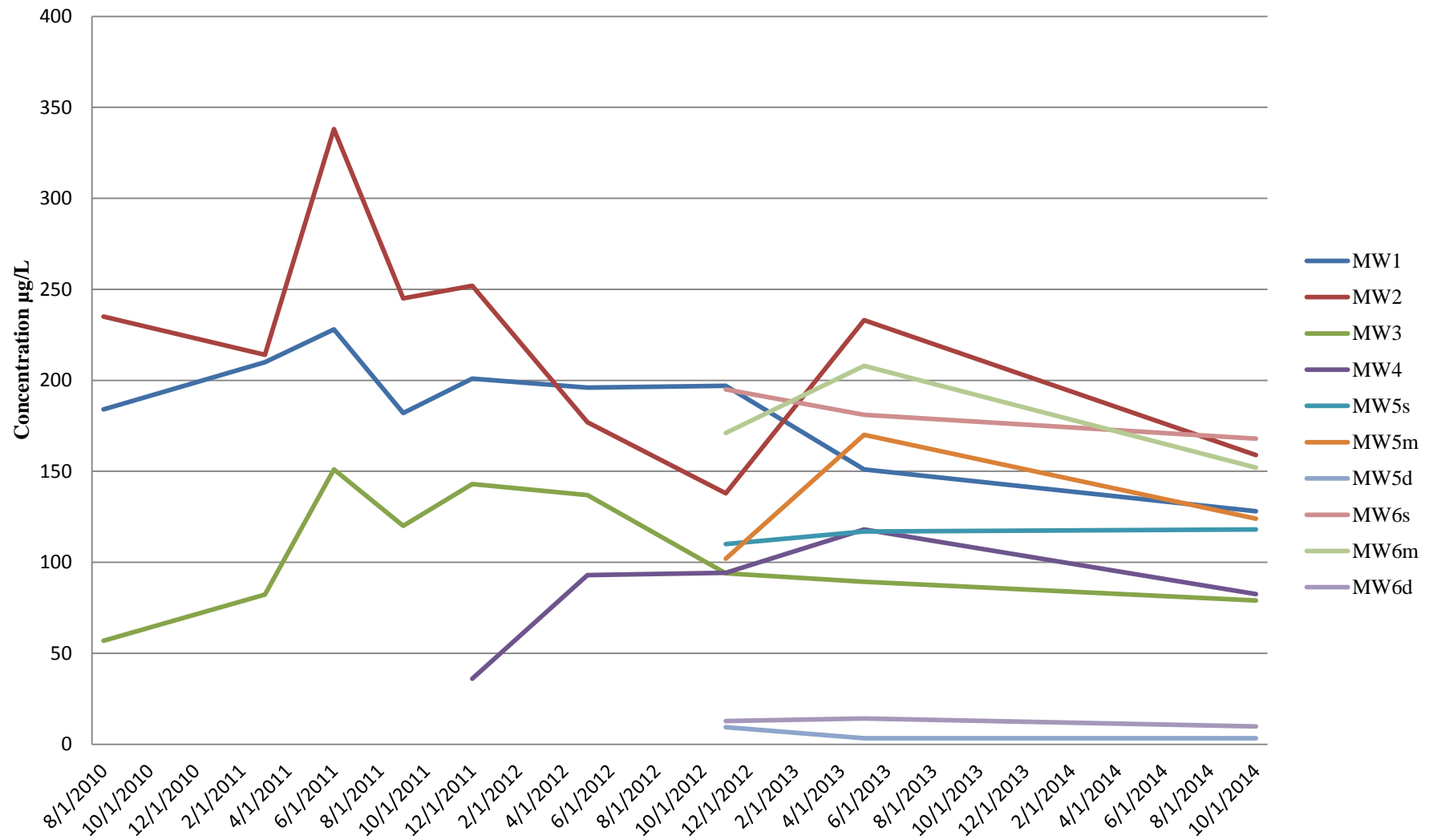


Figure 6

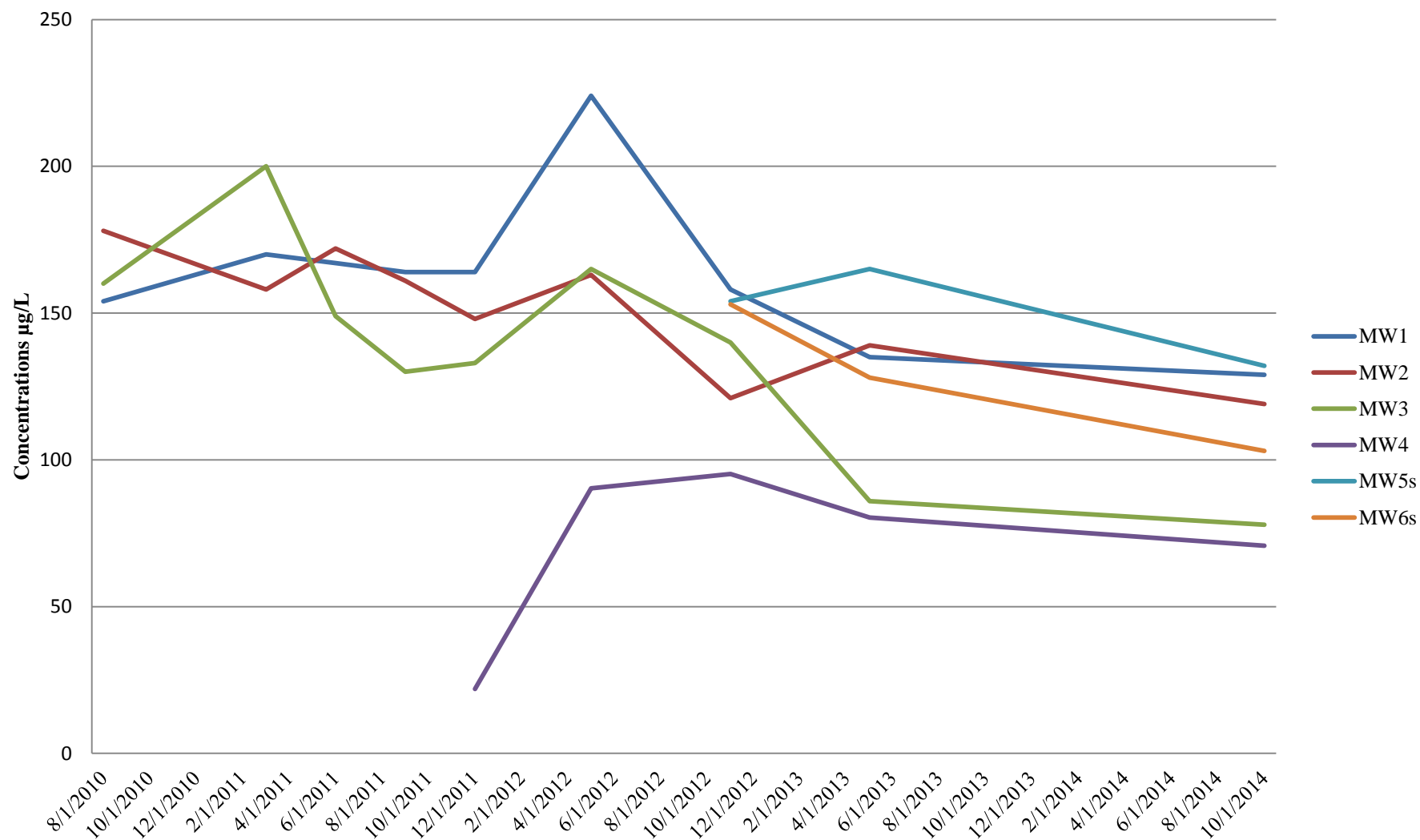
PCE Groundwater Concentrations vs Time
Deep Wells
Continental Heat Treat
Figure 6a

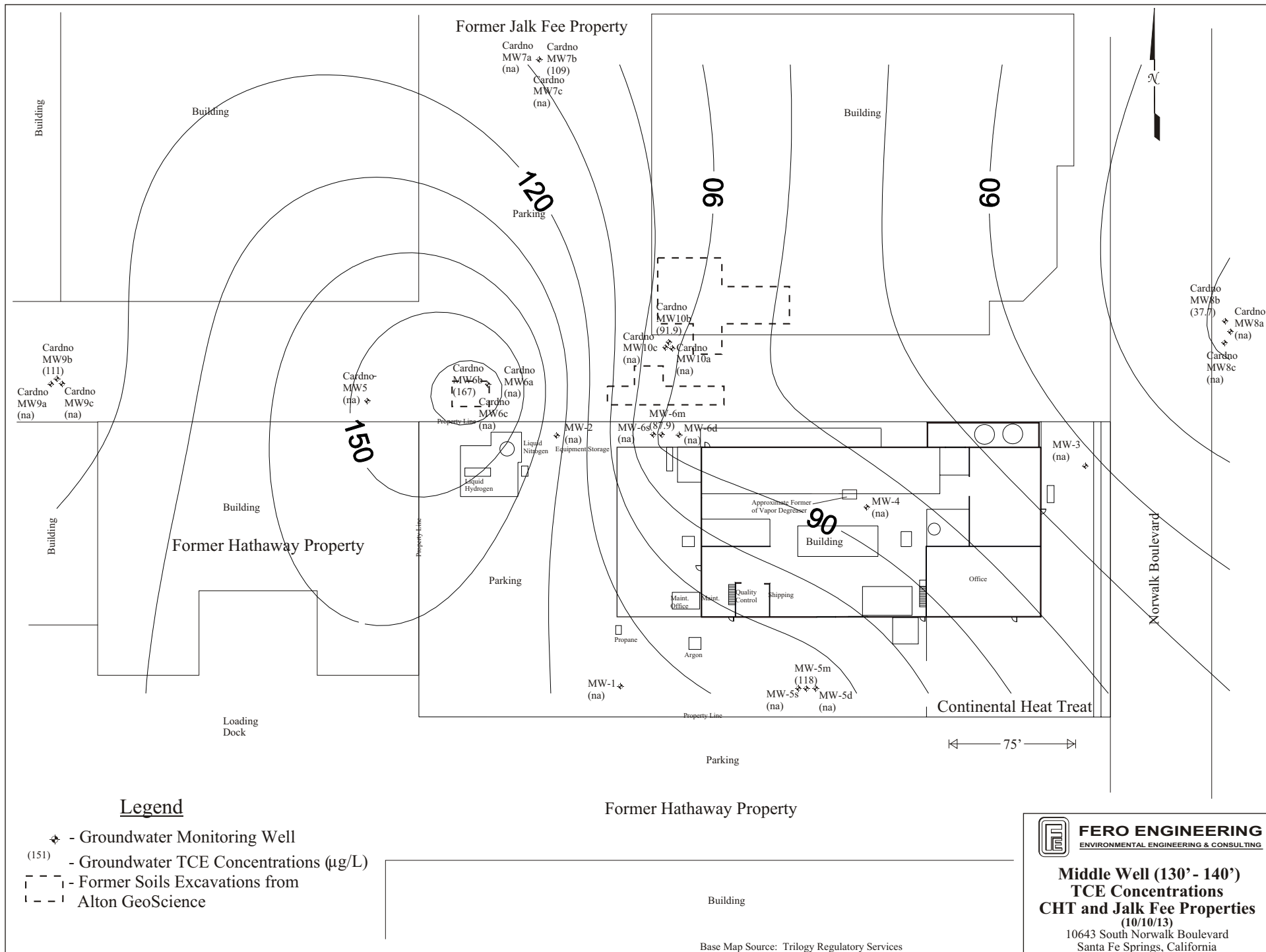


PCE Groundwater Concentrations vs Time
All Wells
Continental Heat Treat
Figure 6b



TCE Groundwater Concetrations vs Time
Watertable Wells
Continental Heat Treat
Figure 7a

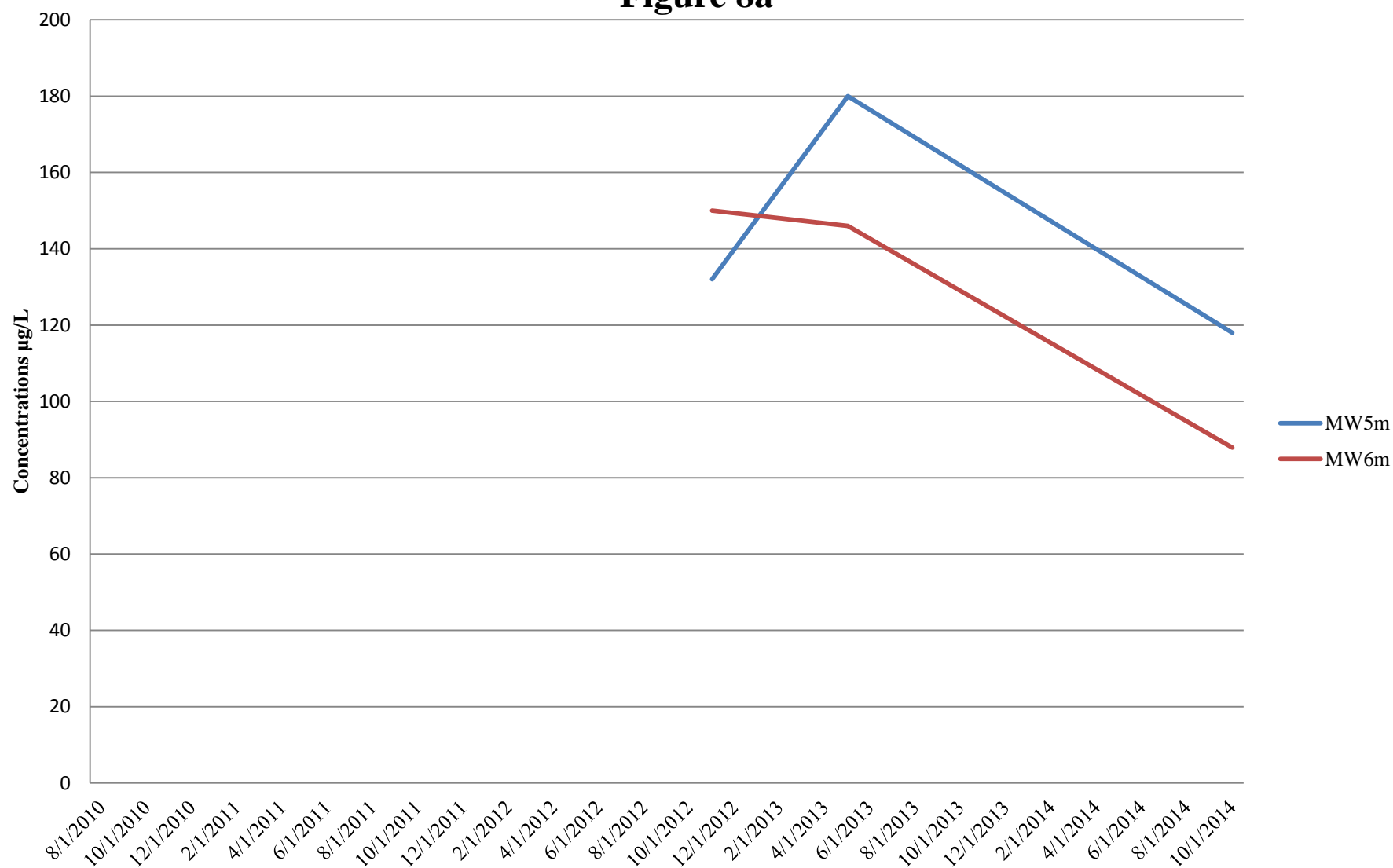


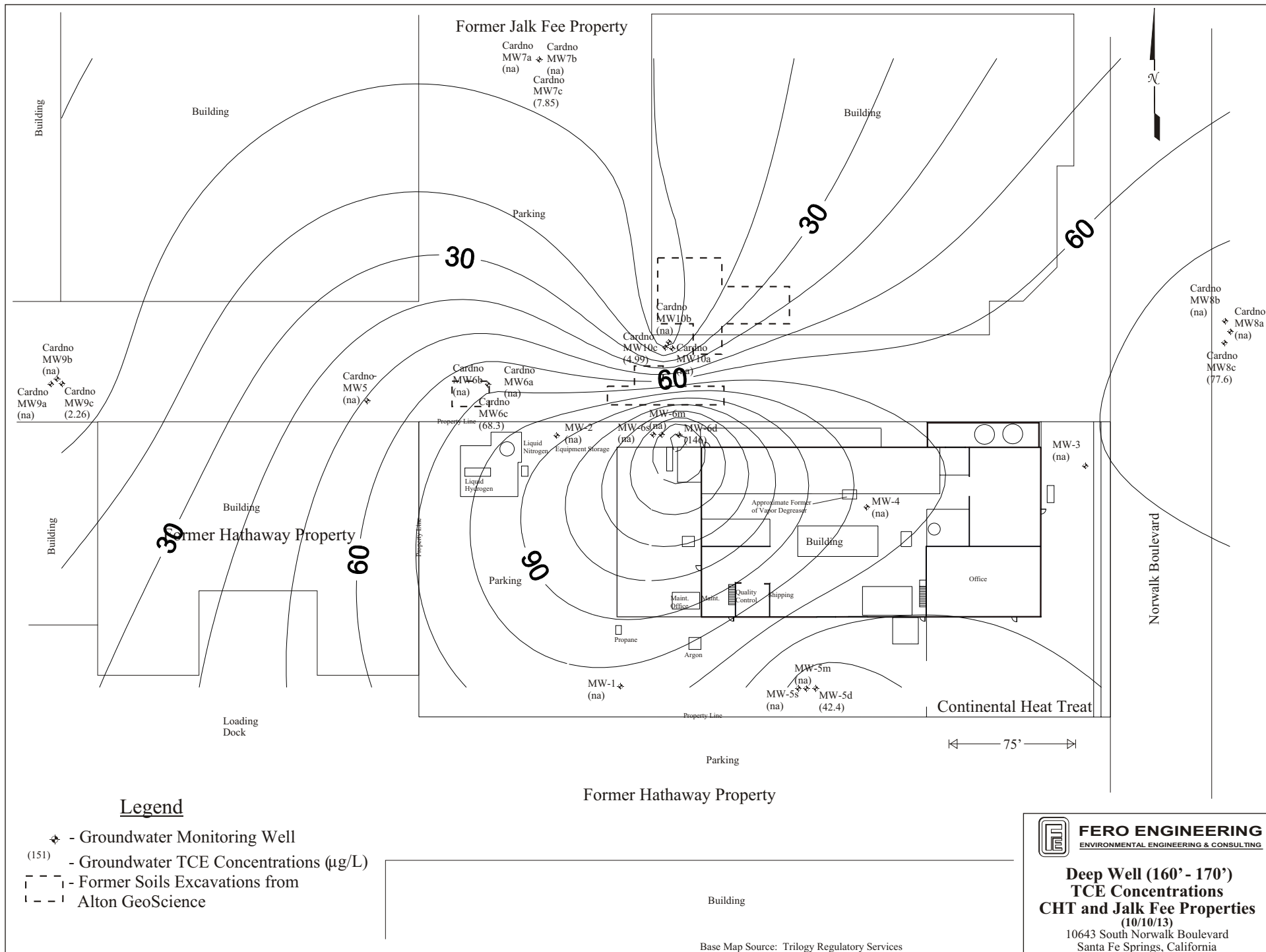


[758midwellTCE1013]

Figure 8

TCE Groundwater Concetrations vs Time
Middle Wells
Continental Heat Treat
Figure 8a

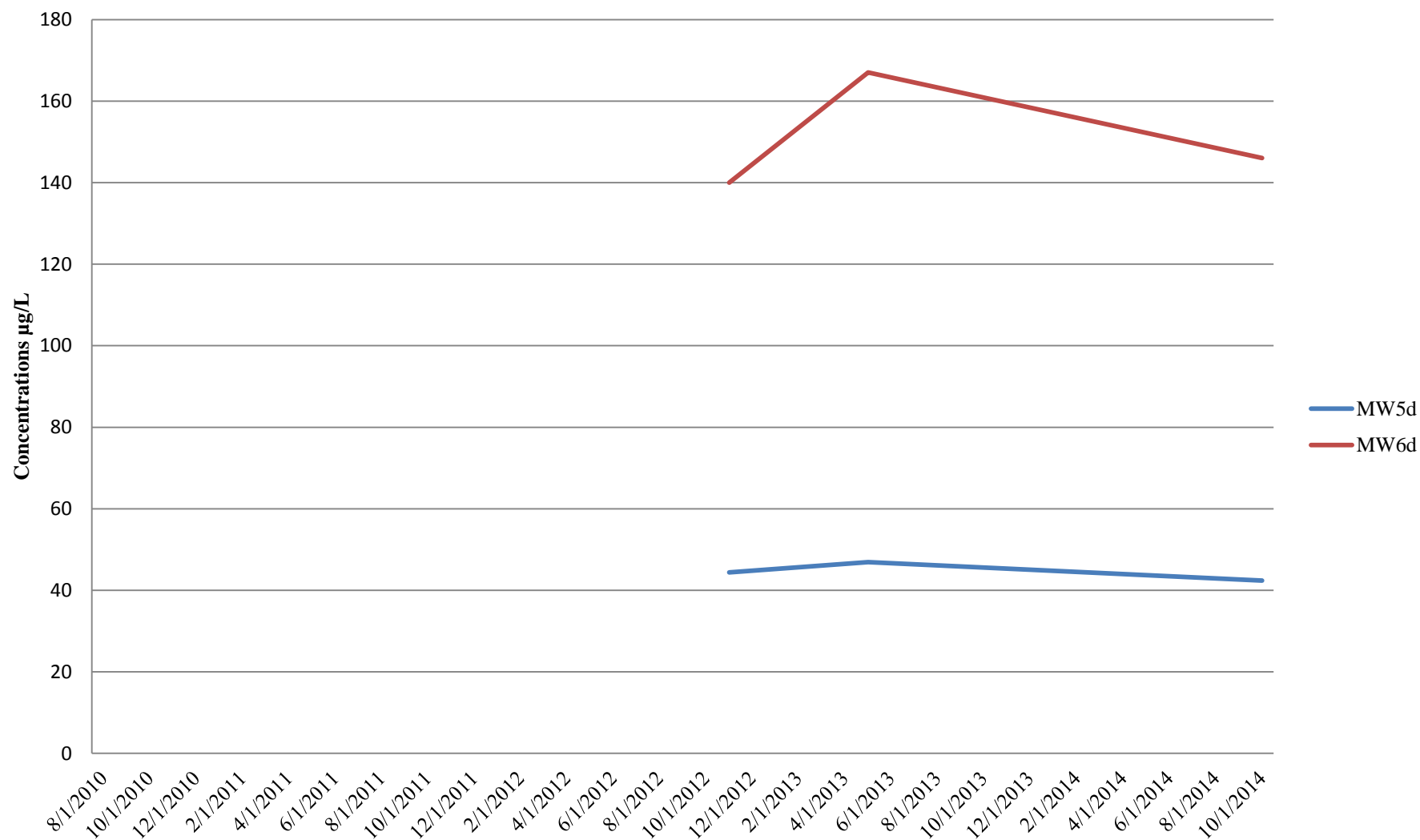




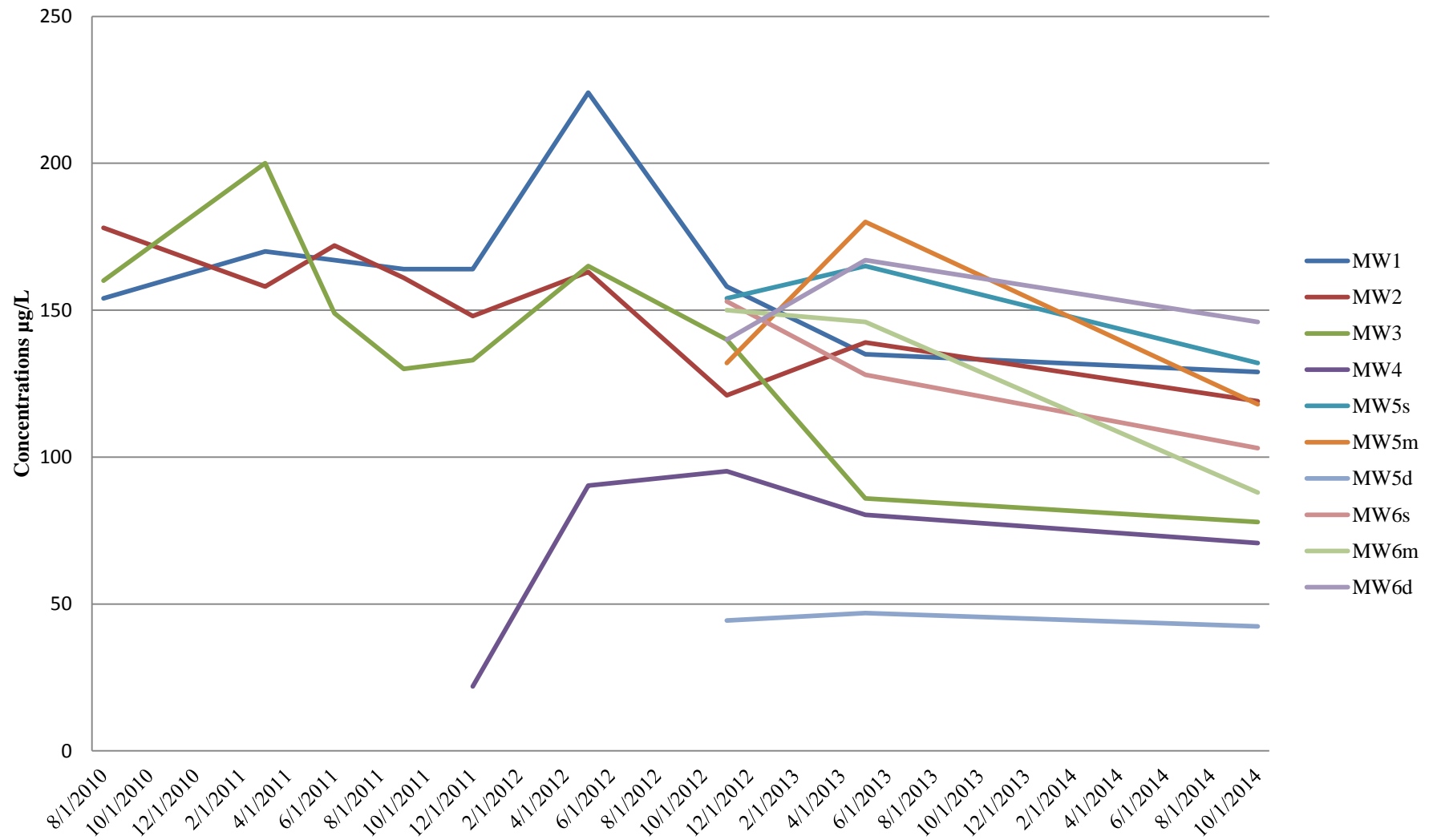
[758deepwelTCE1013]

Figure 9

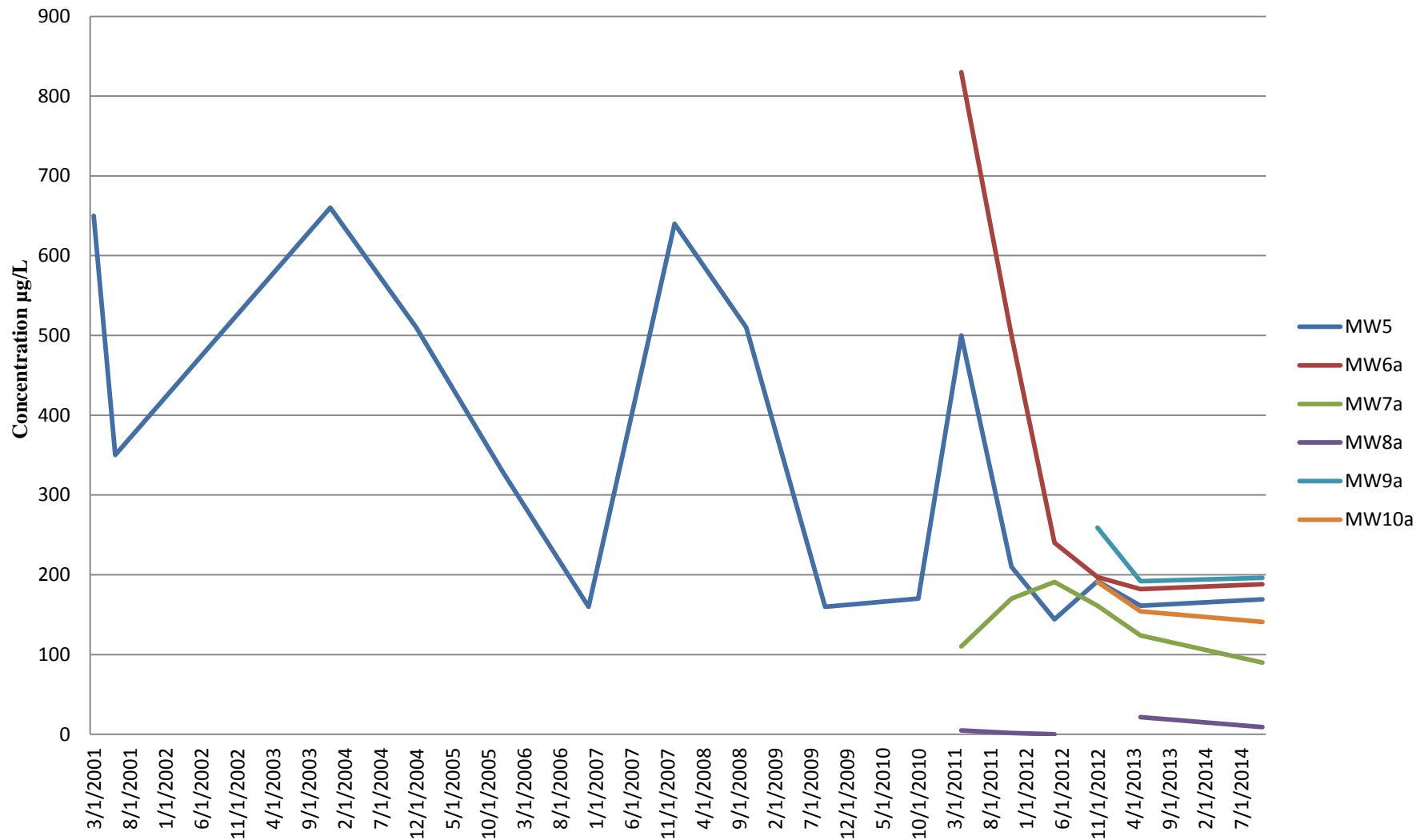
TCE Groundwater Concetrations vs Time
Deep Wells
Continental Heat Treat
Figure 9a



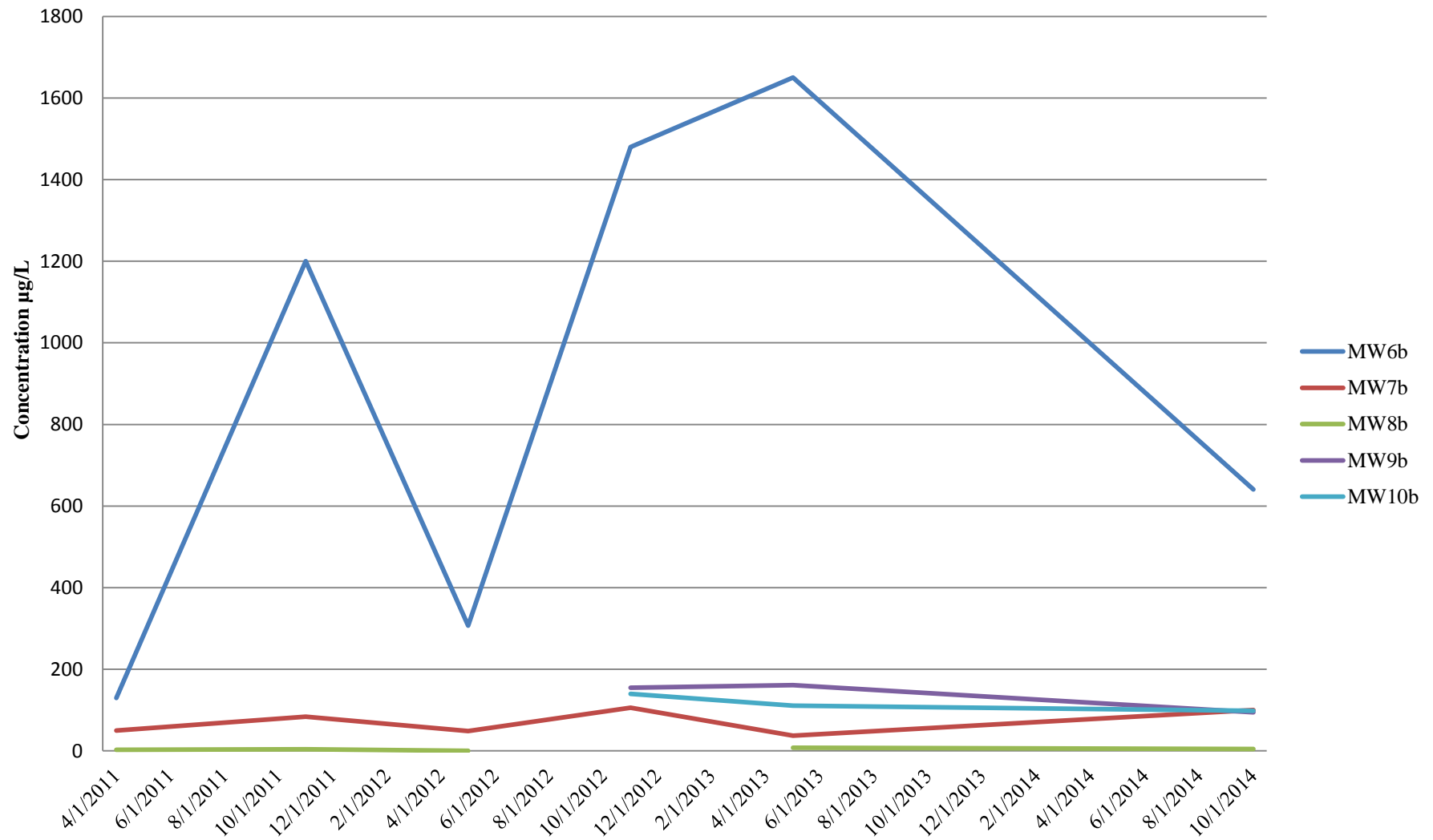
TCE Groundwater Concetrations vs Time
All Wells
Continental Heat Treat
Figure 9b



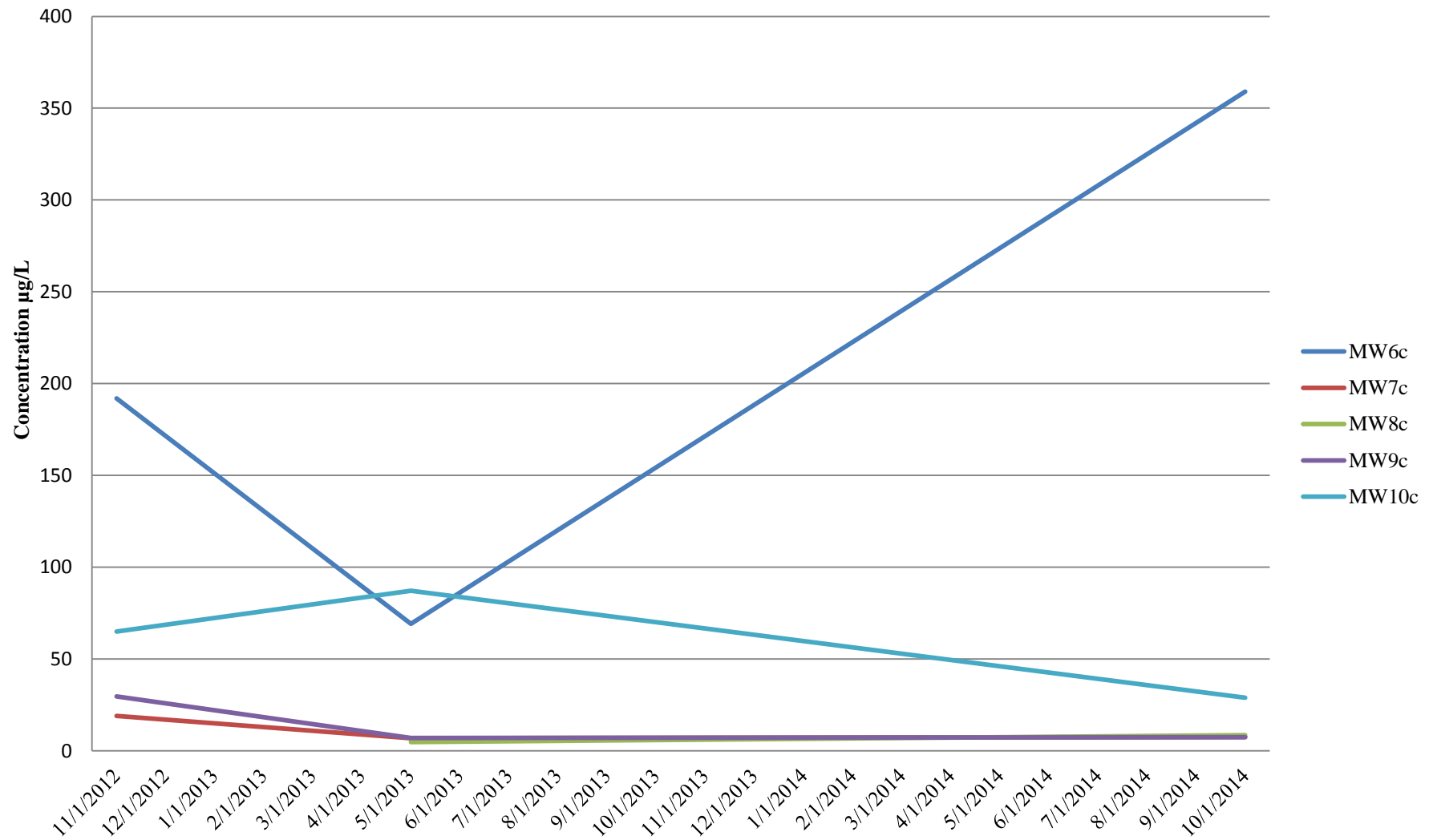
PCE Groundwater Concentrations vs Time
Watertable Wells
Jalk Fee Property
Figure 10



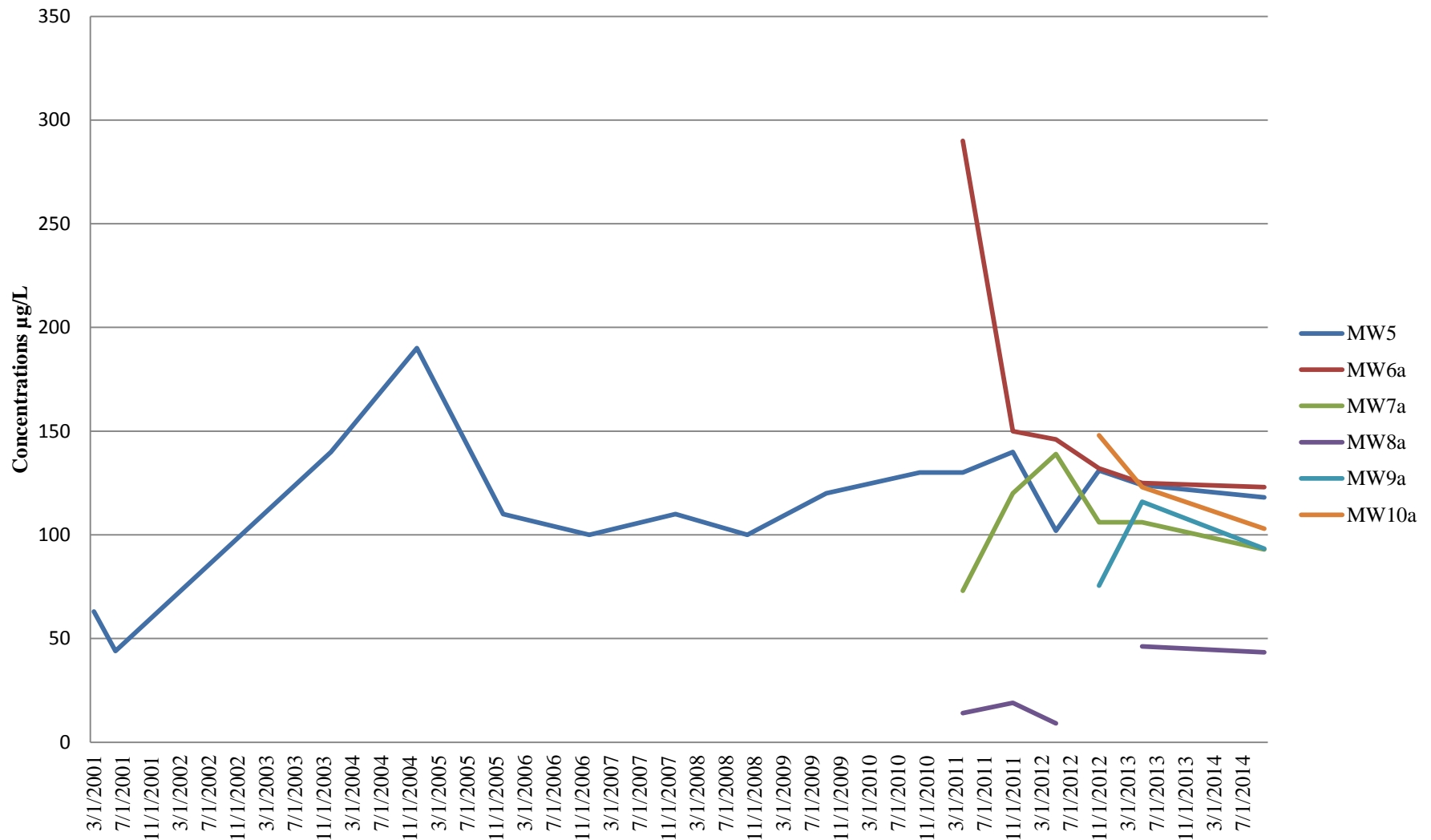
PCE Groundwater Concentrations vs Time
Middle Wells
Jalk Fee Property
Figure 11



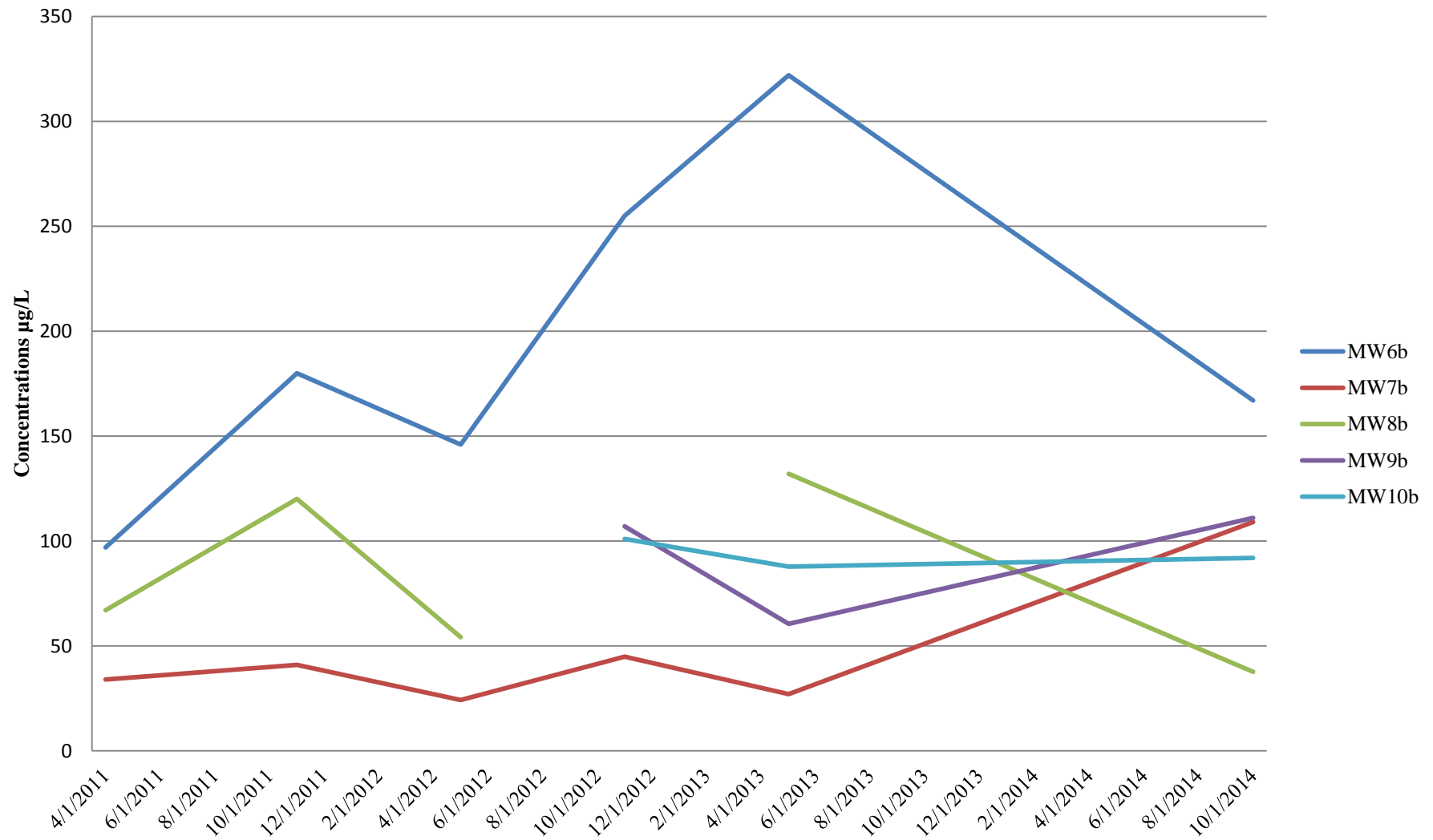
PCE Groundwater Concentrations vs Time
Deep Wells
Jalk Fee
Figure 12



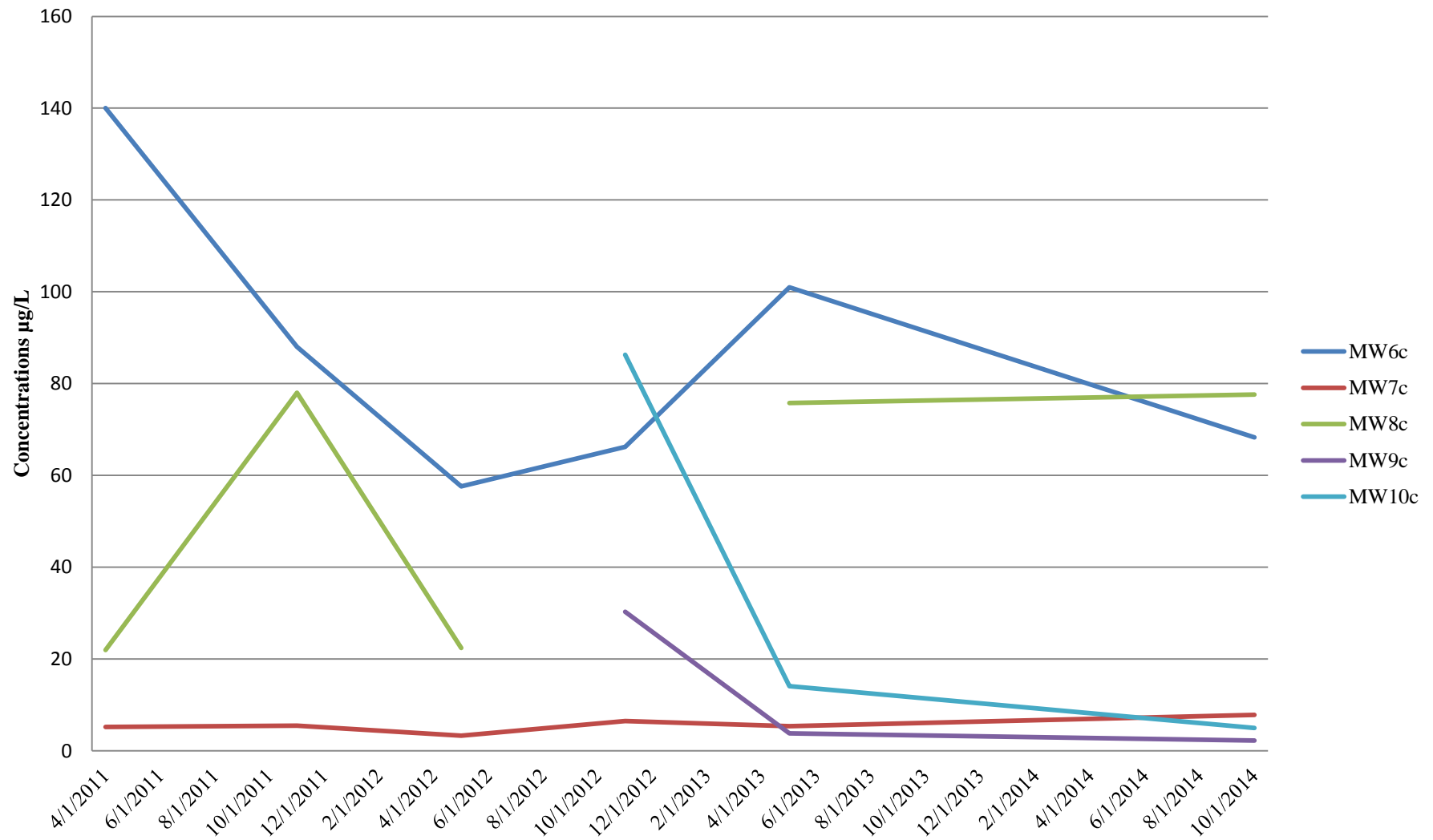
TCE Groundwater Concetrations vs Time
Watertable Wells
Jalk Fee Property
Figure 13



TCE Groundwater Concetrations vs Time
Middle Wells
Jalk Fee Property
Figure 14



TCE Groundwater Concetrations vs Time
Deep Wells
Jalk Fee Property
Figure 15



ATTACHMENT A

Well Purge Reports

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW1

Date: 10/10/13

DTGW: 96.24'

Time Sampled: 12:50 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	75	6.86	1303
10	73.8	6.80	1326
15	73.3	6.78	1377
20	72.4	6.77	1376

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW2

Date: 10/10/13

DTGW: 96.09'

Time Sampled: 1:20 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	75.5	6.83	1268
10	74.5	6.81	1286
15	73.8	6.80	1308
20	73.6	6.77	1276

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW3

Date: 10/10/13

DTGW: 94.84'

Time Sampled: 10:40 am

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	71.8	6.52	1584
10	72.6	6.54	1602
15	72.2	6.55	1566
20	71.9	6.54	1572

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW5s

Date: 10/10/13

DTGW: 95.97'

Time Sampled: 12:30 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	74.4	6.75	1350
10	73.2	6.67	1370
15	74.2	6.78	1380
20	74.7	6.81	1367

Groundwater Well Monitoring Data

Site:	Continental Heat Treating	Job Number:	12-0758
Well I.D.:	MW5m	Date:	10/10/13
DTGW:	96.92'	Time Sampled:	12:05 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	75.1	6.97	1268
10	74.8	6.94	1283
15	74.0	6.90	1324
20	74.2	6.87	1286
25	74.7	6.97	1299
30	74.5	6.89	1300

Groundwater Well Monitoring Data

Site:	Continental Heat Treating	Job Number:	12-0758
Well I.D.:	MW5d	Date:	10/10/13
DTGW:	96.12'	Time Sampled:	11:40 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	74.3	7.10	951
10	75.5	7.11	970
15	75.6	7.12	972
20	76.0	7.15	964
25	76.7	7.13	932
30	75.5	7.10	915
35	75.2	7.11	945
40	75.4	7.12	933

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW6s

Date: 10/10/13

DTGW: 95.84'

Time Sampled: 2:52 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	71.1	5.87	1386
10	71.6	5.76	1394
15	72.1	5.82	1400
20	71.9	5.85	1395
25	72.2	5.68	1393

Groundwater Well Monitoring Data

Site: Continental Heat Treating

Job Number: 12-0758

Well I.D.: MW6m

Date: 10/10/13

DTGW: 95.56'

Time Sampled: 2:25 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	71.6	6.63	1278
10	72.1	6.80	1257
15	72.0	6.81	1262
20	71.8	6.81	1264
25	71.8	6.81	1257
30	71.6	6.80	1254

Groundwater Well Monitoring Data

Site:	Continental Heat Treating	Job Number:	12-0758
Well I.D.:	MW6d	Date:	10/10/13
DTGW:	94.74'	Time Sampled:	1:52 pm

Purge Data

<u>Volume (gal.)</u>	<u>Temp (F)</u>	<u>pH</u>	<u>Conductance (µmho)</u>
5	72.4	7.08	889
10	72.3	7.12	893
15	72.5	7.14	881
20	71.4	7.13	884
25	72.3	7.12	888
30	72.0	7.14	890
35	71.9	7.13	902
40	72.1	7.13	892

ATTACHMENT B

Enviro-Chem Laboratory Report

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

Date: October 17, 2013

Mr. John Petersen
Fero Environmental Engineering, Inc.
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

Project: **Continental Heat Treating / 13-758**
Lab ID: 131011-7 to -16

Dear Mr. Petersen:


The **analytical results** for the water samples, received by our laboratory on October 11, 2013, are attached. All samples were received chilled, intact, and accompanying chain of custody record.

Enviro-Chem appreciates the opportunity to provide you and your company this and other services. Please do not hesitate to call us if you have any questions.

Sincerely,



Curtis Desilets
Vice President/Program Manager



Andy Wang
Laboratory Manager

LABORATORY REPORT FORM

LABORATORY NAME: ENVIRO-CHEM, INC.

ADDRESS: 1214 E. LEXINGTON AVE., POMONA, CA 91766

LABORATORY CERTIFICATION

(ELAP) No.: 1555 EXPIRATION DATE: 06/30/2015

LABORATORY DIRECTOR'S NAME: CURTIS DESILETS

LABORATORY'S DIRECTOR SIGNATURE: 

CLIENT: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

PROJECT: Continental Heat Treating / 13-758

ANALYTICAL METHODS: EPA 5030B/8260B (VOCs)

SAMPLING DATE(S): 10/10/13

DATE RECEIVED: 10/11/13

DATE REPORTED: 10/17/13

SAMPLE MATRIX: WATER

EXTRACTION METHOD: SEE ATTACHMENTS

EXTRACTION MATERIAL: PER THE METHODS

CHAIN OF CUSTODY RECEIVED: YES NO

---- SAMPLE HEADSPACE DESCRIPTION (%): 0 %

---- SAMPLE CONTAINER MATERIAL: 40 ML VOA VIALS (2 each)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

LABORATORY REPORT FORM (COVER PAGE 2)

<u>ORGANIC ANALYSES</u>	# OF SAMPLES	# OF SAMPLES SUBCONTRACTED
-------------------------	--------------	-------------------------------

10

0

SAMPLE CONDITION: CHILLED, INTACT, % HEADSPACE: 0%

<u>INORGANIC ANALYSES</u>	# OF SAMPLES	# OF SAMPLES SUBCONTRACTED
---------------------------	--------------	-------------------------------

0

0

SAMPLE CONDITION:

<u>MICROBIOLOGICAL ANALYSES</u>	# OF SAMPLES	# OF SAMPLES SUBCONTRACTED
---------------------------------	--------------	-------------------------------

0

0

SAMPLE CONDITION:

<u>OTHER TYPES OF ANALYSES</u>	# OF SAMPLES	# OF SAMPLES SUBCONTRACTED
--------------------------------	--------------	-------------------------------

0

0

SAMPLE CONDITION:

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: µG/L (PPB)
PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13DATE RECEIVED: 10/11/13

DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-7
CLIENT SAMPLE I.D. MW1
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	3.85
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: µG/L (PPB)
PAGE: 2 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED	<u>10/14/13</u>
DATE EXTRACTED	<u>10/14/13</u>
LAB SAMPLE I.D.	<u>131011-7</u>
CLIENT SAMPLE I.D.	<u>MW1</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>NONE (15 MLs PURGED)</u>

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	11.9
CIS-1,2-DICHLOROETHENE	0.5	ND	101
TRANS-1,2-DICHLOROETHENE	0.5	ND	8.51
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	2.54
1,1-DICHLOROETHENE	0.5	ND	78.0
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED	<u>10/14/13</u>
DATE EXTRACTED	<u>10/14/13</u>
LAB SAMPLE I.D.	<u>131011-7</u>
CLIENT SAMPLE I.D.	<u>MW1</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>NONE (15 MLs PURGED)</u>

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	138
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	129
TRICHLOROFLUOROMETHANE	0.5	ND	4.11
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	7.35
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: _____

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13DATE RECEIVED: 10/11/13

DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-8
CLIENT SAMPLE I.D. MW2
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	ND
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: µG/L (PPB)
PAGE: 2 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13DATE RECEIVED: 10/11/13

DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-8
CLIENT SAMPLE I.D. MW2
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	69.6
CIS-1,2-DICHLOROETHENE	0.5	ND	38.8
TRANS-1,2-DICHLOROETHENE	0.5	ND	ND
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	ND
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-8
CLIENT SAMPLE I.D. MW2
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	159
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	119
TRICHLOROFLUOROMETHANE	0.5	ND	ND
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	ND
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: 

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: µG/L (PPB)
PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13DATE RECEIVED: 10/11/13

DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-9
CLIENT SAMPLE I.D. MW3
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	0.51
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	3.21
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

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LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: $\mu\text{G/L (PPB)}$
PAGE: 2 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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CLIENT SAMPLE I.D. MW3
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	7.68
CIS-1,2-DICHLOROETHENE	0.5	ND	73.9
TRANS-1,2-DICHLOROETHENE	0.5	ND	13.0
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	69.9
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	0.54
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

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LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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LAB SAMPLE I.D. 131011-9
CLIENT SAMPLE I.D. MW3
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	79.0
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	77.9
TRICHLOROFLUOROMETHANE	0.5	ND	3.00
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	5.70
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

uG/L = MICROGRAM PER LITER = PPB

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MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: 

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LAB SAMPLE I.D. 131011-10
CLIENT SAMPLE I.D. MW4
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	2.56
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

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LABORATORY REPORT

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LAB SAMPLE I.D. 131011-10
CLIENT SAMPLE I.D. MW4
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	9.71
CIS-1,2-DICHLOROETHENE	0.5	ND	454
TRANS-1,2-DICHLOROETHENE	0.5	ND	23.0
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	77.7
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

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LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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CLIENT SAMPLE I.D. MW4
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	82.6
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	70.7
TRICHLOROFLUOROMETHANE	0.5	ND	ND
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	74.4
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

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DATE ANALYZED 10/14/13
DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-11
CLIENT SAMPLE I.D. MW5s
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	0.73
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	3.75
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

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LAB SAMPLE I.D. 131011-11
CLIENT SAMPLE I.D. MW5s
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	11.1
CIS-1,2-DICHLOROETHENE	0.5	ND	56.1
TRANS-1,2-DICHLOROETHENE	0.5	ND	8.06
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	74.2
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

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LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
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EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	118
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	132
TRICHLOROFLUOROMETHANE	0.5	ND	ND
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	ND
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

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LAB SAMPLE I.D. 131011-12
CLIENT SAMPLE I.D. MW5m
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	ND
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

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LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
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LAB SAMPLE I.D. 131011-12
CLIENT SAMPLE I.D. MW5m
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	8.75
CIS-1,2-DICHLOROETHENE	0.5	ND	22.5
TRANS-1,2-DICHLOROETHENE	0.5	ND	ND
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	72.5
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
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Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED	<u>10/14/13</u>
DATE EXTRACTED	<u>10/14/13</u>
LAB SAMPLE I.D.	<u>131011-12</u>
CLIENT SAMPLE I.D.	<u>MW5m</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>5</u>

COMPOUND	CRDL	MB	RESULT
<u>1,1,2,2-TETRACHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TETRACHLOROETHENE (PCE)</u>	<u>0.5</u>	<u>ND</u>	<u>124</u>
<u>TOLUENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,3-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,1-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,2-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TRICHLOROETHENE (TCE)</u>	<u>0.5</u>	<u>ND</u>	<u>118</u>
<u>TRICHLOROFLUOROMETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,3-TRICHLOROPROPANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,3,5-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>VINYL CHLORIDE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>M,P-XYLENE</u>	<u>1.0</u>	<u>ND</u>	<u>ND</u>
<u>O-XYLENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: 

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: µG/L (PPB)
PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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DATE EXTRACTED 10/14/13
LAB SAMPLE I.D. 131011-13
CLIENT SAMPLE I.D. MW5d
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	ND
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

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EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	5.89
CIS-1,2-DICHLOROETHENE	0.5	ND	32.0
TRANS-1,2-DICHLOROETHENE	0.5	ND	2.39
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	60.0
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

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PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	3.40
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	42.4
TRICHLOROFLUOROMETHANE	0.5	ND	ND
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	ND
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

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DATE EXTRACTED	<u>10/14/13</u>
LAB SAMPLE I.D.	<u>131011-14</u>
CLIENT SAMPLE I.D.	<u>MW6s</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>NONE (15 MLs PURGED)</u>

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	5.13
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

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LABORATORY REPORT

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LAB SAMPLE I.D. 131011-14
CLIENT SAMPLE I.D. MW6s
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	13.0
CIS-1,2-DICHLOROETHENE	0.5	ND	117
TRANS-1,2-DICHLOROETHENE	0.5	ND	5.21
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	2.26
1,1-DICHLOROETHENE	0.5	ND	70.0
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
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LAB SAMPLE I.D.	<u>131011-14</u>
CLIENT SAMPLE I.D.	<u>MW6s</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>NONE (15 MLs PURGED)</u>

COMPOUND	CRDL	MB	RESULT
<u>1,1,2,2-TETRACHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TETRACHLOROETHENE (PCE)</u>	<u>0.5</u>	<u>ND</u>	<u>168</u>
<u>TOLUENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,3-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,1-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,2-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TRICHLOROETHENE (TCE)</u>	<u>0.5</u>	<u>ND</u>	<u>103</u>
<u>TRICHLOROFLUOROMETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>9.44</u>
<u>1,2,3-TRICHLOROPROPANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,3,5-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>VINYL CHLORIDE</u>	<u>0.5</u>	<u>ND</u>	<u>7.49</u>
<u>M,P-XYLENE</u>	<u>1.0</u>	<u>ND</u>	<u>ND</u>
<u>O-XYLENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: _____

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LABORATORY REPORT

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PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

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DATE ANALYZED 10/15/13
DATE EXTRACTED 10/15/13
LAB SAMPLE I.D. 131011-15
CLIENT SAMPLE I.D. MW6m
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	5.33
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

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EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	12.9
CIS-1,2-DICHLOROETHENE	0.5	ND	35.4
TRANS-1,2-DICHLOROETHENE	0.5	ND	12.7
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	ND
1,1-DICHLOROETHENE	0.5	ND	91.7
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

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LABORATORY REPORT

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EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) 5

COMPOUND	CRDL	MB	RESULT
1,1,2,2-TETRACHLOROETHANE	0.5	ND	ND
TETRACHLOROETHENE (PCE)	0.5	ND	152
TOLUENE	0.5	ND	ND
1,2,3-TRICHLOROBENZENE	0.5	ND	ND
1,2,4-TRICHLOROBENZENE	0.5	ND	ND
1,1,1-TRICHLOROETHANE	0.5	ND	ND
1,1,2-TRICHLOROETHANE	0.5	ND	ND
TRICHLOROETHENE (TCE)	0.5	ND	87.9
TRICHLOROFLUOROMETHANE	0.5	ND	8.07
1,2,3-TRICHLOROPROPANE	0.5	ND	ND
1,2,4-TRIMETHYLBENZENE	0.5	ND	ND
1,3,5-TRIMETHYLBENZENE	0.5	ND	ND
VINYL CHLORIDE	0.5	ND	ND
M,P-XYLENE	1.0	ND	ND
O-XYLENE	0.5	ND	ND

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: 

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 1 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED 10/15/13
DATE EXTRACTED 10/15/13
LAB SAMPLE I.D. 131011-16
CLIENT SAMPLE I.D. MW6d
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
ACETONE	2.0	ND	ND
BENZENE	0.5	ND	ND
BROMOBENZENE	0.5	ND	ND
BROMOCHLOROMETHANE	0.5	ND	ND
BROMODICHLOROMETHANE	0.5	ND	ND
BROMOFORM	0.5	ND	ND
BROMOMETHANE	0.5	ND	ND
2-BUTANONE (MEK)	2.0	ND	ND
N-BUTYLBENZENE	0.5	ND	ND
SEC-BUTYLBENZENE	0.5	ND	ND
TERT-BUTYLBENZENE	0.5	ND	ND
CARBON DISULFIDE	2.0	ND	ND
CARBON TETRACHLORIDE	0.5	ND	ND
CHLOROBENZENE	0.5	ND	ND
CHLOROETHANE	0.5	ND	ND
CHLOROFORM	0.5	ND	ND
CHLOROMETHANE	0.5	ND	ND
2-CHLOROTOLUENE	0.5	ND	ND
4-CHLOROTOLUENE	0.5	ND	ND
DIBROMOCHLOROMETHANE	0.5	ND	ND
1,2-DIBROMO-3-CHLOROPROPANE	0.5	ND	ND
1,2-DIBROMOETHANE	0.5	ND	ND
DIBROMOMETHANE	0.5	ND	ND
1,2-DICHLOROBENZENE	0.5	ND	ND
1,3-DICHLOROBENZENE	0.5	ND	ND
1,4-DICHLOROBENZENE	0.5	ND	ND

- CONTINUED -

Enviro - Chem, Inc.

1214 E. Lexington Avenue, Pomona, CA 91766 Tel (909) 590-5905 Fax (909) 590-5907

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 2 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED 10/15/13
DATE EXTRACTED 10/15/13
LAB SAMPLE I.D. 131011-16
CLIENT SAMPLE I.D. MW6d
EXTRACTION SOLVENT HELIUM GAS/WATER
EXTRACTION METHOD EPA 5030B
DILUTION FACTOR (DF) NONE (15 MLs PURGED)

COMPOUND	CRDL	MB	RESULT
DICHLORODIFLUOROMETHANE	0.5	ND	ND
1,1-DICHLOROETHANE	0.5	ND	11.3
CIS-1,2-DICHLOROETHENE	0.5	ND	55.5
TRANS-1,2-DICHLOROETHENE	0.5	ND	ND
1,2-DICHLOROPROPANE	0.5	ND	ND
1,2-DICHLOROETHANE	0.5	ND	2.26
1,1-DICHLOROETHENE	0.5	ND	143
1,3-DICHLOROPROPANE	0.5	ND	ND
2,2-DICHLOROPROPANE	0.5	ND	ND
1,1-DICHLOROPROPENE	0.5	ND	ND
CIS-1,3-DICHLOROPROPENE	0.5	ND	ND
TRANS-1,3-DICHLOROPROPENE	0.5	ND	ND
ETHYLBENZENE	0.5	ND	ND
2-HEXANONE	2.0	ND	ND
HEXACHLOROBUTADIENE	0.5	ND	ND
IODOMETHANE	0.5	ND	ND
ISOPROPYLBENZENE	0.5	ND	ND
4-ISOPROPYLTOLUENE	0.5	ND	ND
4-METHYL-2-PENTANONE (MIBK)	2.0	ND	ND
METHYL tert-BUTYL ETHER	0.5	ND	ND
METHYLENE CHLORIDE	2.0	ND	ND
NAPHTHALENE	0.5	ND	ND
N-PROPYLBENZENE	0.5	ND	ND
STYRENE	0.5	ND	ND
1,1,1,2-TETRACHLOROETHANE	0.5	ND	ND

- CONTINUED -

LABORATORY REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 3 OF 3 PAGES PROJECT: Continental Heat Treating / 13-758

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED	<u>10/15/13</u>
DATE EXTRACTED	<u>10/15/13</u>
LAB SAMPLE I.D.	<u>131011-16</u>
CLIENT SAMPLE I.D.	<u>MW6d</u>
EXTRACTION SOLVENT	<u>HELIUM GAS/WATER</u>
EXTRACTION METHOD	<u>EPA 5030B</u>
DILUTION FACTOR (DF)	<u>NONE (15 MLs PURGED)</u>

COMPOUND	CRDL	MB	RESULT
<u>1,1,2,2-TETRACHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TETRACHLOROETHENE (PCE)</u>	<u>0.5</u>	<u>ND</u>	<u>9.84</u>
<u>TOLUENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,3-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRICHLOROBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,1-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,1,2-TRICHLOROETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>TRICHLOROETHENE (TCE)</u>	<u>0.5</u>	<u>ND</u>	<u>146</u>
<u>TRICHLOROFLUOROMETHANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,3-TRICHLOROPROPANE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,2,4-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>1,3,5-TRIMETHYLBENZENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>VINYL CHLORIDE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>
<u>M,P-XYLENE</u>	<u>1.0</u>	<u>ND</u>	<u>ND</u>
<u>O-XYLENE</u>	<u>0.5</u>	<u>ND</u>	<u>ND</u>

uG/L = MICROGRAM PER LITER = PPB

CRDL = CONTRACT REQUIRED DETECTION LIMIT

MB = METHOD BLANK

ND = NON-DETECTED OR BELOW THE CRDL

DATA APPROVED BY: 

QA/QC REPORT

METHOD: EPA 8260B MATRIX: WATER REPORTING UNIT: uG/L (PPB)
PAGE: 1 OF 10 PAGES PROJECT: **Continental Heat Treating / 13-758**

CUSTOMER: **Fero Environmental Engineering, Inc.**
431 W. Lambert Road, Suite 305
Brea, CA 92821
Tel (714) 256-2737 Fax (714) 256-1505

DATE SAMPLED: 10/10/13

DATE RECEIVED: 10/11/13

DATE ANALYZED

10/14-15/13

DATE EXTRACTED

10/14-15/13

SEE ATTACHED PAGES (9)

Enviro-Chem, Inc. Laboratories

1214 E. Lexington Avenue,

Pomona, CA 91766

Tel: (909) 590-5905 Fax: (909) 590-5907

CA-DHS ELAP CERTIFICATE #1555

Turnaround Time

0 Same Day

0 24 Hours

0 48 Hours

0 72 Hours

0 1 Week (Standard)

Other:

TEMPERATURE

NO. OF CONTAINERS

PRESERVATION

MATRIX

SAMPLING DATE

TIME

SAMPLE ID

LAB ID

Analysis Required

COMMENTS

Misc.

X LA
RWQCB
Format

VOCs 8260B

Company Name:

Fero Eng

Project Contact:

John Petersen

Sampler's Signature:

[Signature]

Address:

431 W. Lambert Rd #305

Tel: 714 256 2737

City/State/Zip:

Brea CA 92821

Fax:

714 256 1505

Project Name/ID: Continental Heat

Treating
13-758

Relinquished by:

[Signature]

Received by:

[Signature]

Relinquished by:

Received by:

Date & Time:

10/11/13 0940

Relinquished by:

Received by:

Date & Time:

10/11/13 0940

Instructions for Sample Storage After Analysis:

☒ Dispose of ☐ Return to Client ☐ Store (30 Days)

☐ Other:

CHAIN OF CUSTODY RECORD

Date:

WHITE WITH SAMPLE - YELLOW TO CLIENT

Page

1 of 1

Date Analyzed: 10/14-15/2013
 Method: 624BW154
 Machine: B
 Matrix: Water
 Unit: ug/L (PPB)

Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

Spiked Sample Lab I.D.: 131014-LCS1/2

Analyte	S.R.	spk conc	MS	%RC	MSD	%RC	%RPD	ACP %RC	ACP RPD
Trichloroethene	0.00	25.0	28.8	115%	26.6	106%	8%	80-120	0-20
Toluene	0.00	25.0	26.8	107%	24.5	98%	9%	80-120	0-20
Ethylbenzene	0.00	25.0	26.3	105%	26.4	106%	0%	80-120	0-20
Cis-1,2-Dichloroethene	0.00	25.0	25.4	101%	22.7	91%	11%	80-120	0-20
Tetrachloroethene	0.00	25.0	26.5	106%	28.0	112%	6%	80-120	0-20

Lab Control Spike (LCS)

Analyte	spk conc	LCS	%RC	ACP %RC
1,1,1-TCA	25.0	19.9	80%	80-120
Tetrachloroethene	25.0	25.5	102%	80-120
Benzene	25.0	20.8	83%	80-120
Toluene	25.0	22.7	91%	80-120
Ethylbenzene	25.0	25.4	101%	80-120
Chloroform	25.0	22.2	89%	80-120

Continuing Calibration Check (CCC)

Analyte	AvgRF	CCRF	%Dev	%RSD
1,1,1-TCA	0.749	0.774	3.34	10.23
Trichloroethene	0.357	0.364	1.96	12.24
Tetrachloroethene	0.996	1.001	0.50	12.75
Toluene	1.322	1.369	3.56	10.80
Chloroform	0.808	0.792	1.98	6.86
Cis-1,2-Dichloroethene	1.064	1.080	1.50	8.99

Calibration date: 1/23/2013

Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	103%	93%	102%			
Toluene-d8	25.0	75-125	95%	97%	66*	98%			
4-Bromofluorobenzene	25.0	75-125	116%	85%	126%	98%			
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	103%	93%	102%			
Toluene-d8	25.0	75-125	95%	97%	66*	98%			
4-Bromofluorobenzene	25.0	75-125	116%	85%	126%	98%			
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	103%	93%	102%			
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Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
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Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%	103%	90%
Toluene-d8	25.0	75-125	100%	99%	96%	99%	111%	81%	98%
4-Bromofluorobenzene	25.0	75-125	115%	128%	113%	122%	103%	109%	103%
Surrogate Recovery	spk conc	ACP%	%RC	%RC	%RC	%RC	%RC	%RC	%RC
Sample I.D.									
Dibromofluoromethane	25.0	75-125	98%	99%	109%	100%	116%		

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GC Sequence #	Standard Name:	Solvent	Stock Standard	Calculation STD V X STD Conc. = Final Conc. Total Volume	Ref. / Page	Prep. Date	Exp. Date	Initial
2837	8760B Gas VOC Mix	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: GC-508 Detailed log book A-4 Page 15/100	75.0ul x 2000 ppm = 50.0 ppm 1.00ml		7/9/13	8/5/13	PN
2838	8281 IS / snob	Name: Hexane Source: Fisher Cat #: H304-4 Lot #: 125944 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: A-4 Page 15/100	x = 10 ppm		7/29/13	7/29/13 10/3/13	B
2839	8760 Tune Standard	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: H304-4 Page 15/100 1.010g x 99% = 10,000 ppm 100.0 ml			7/30/13	7/29/13	PN
2840	8260 Tune Std. 5ppm	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: GC-2839	5ul x 10,000 ppm = 5 ppm 10ml		7/30/13	7/29/13	PN
2841	8760 Tune Std. 50ppm	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: GC-2839	50ul x 10,000 ppm = 50.0 ppm 10ml		7/30/13	7/29/13	PN
2842	8760B COV	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: GC-2839	Detail in logbook x = A4-116		7/30/13	8/31/13	PN
2843	8760B 1515ul	Name: MEQH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 1/25/94	Name: Source: Cat #: Lot #: Exp. Date: GC-2839	Detail in logbook x = A4-117		7/31/13	11/30/13	P

GC Sequence #	Standard Name:	Solvent	Stock Standard	Calculation		Ref. / Page	prep. Date	Exp. Date	Initial
				STD V X STD Conc. =	Final Conc. Total Volume				
2865	8760B GLAS VOC MIX	MEOH Fisher A4584-1 117564	GC-508 Name: 10Xaphene solution Source: ULTRA Cat #: PP-271 Lot #: CH-2783 Exp. Date: 9/20/15	$12.5\mu\text{L} \times 7000\text{ppm} = 50.0\text{ppm}$ 0.50mL			9/20/13	10/7/13	W
2860	8081 Toluene	Hexane Fisher H304-4 175544	GC-508 Name: 10Xaphene solution Source: ULTRA Cat #: PP-271 Lot #: CH-2783 Exp. Date: 9/20/15	$100\mu\text{L} \times 100\text{ppm} = 20\text{ppm}$ 20 mL			10/2/13	10/2/14	B
2867	8760B GLAS VOC MIX	MEOH Fisher A4584-1 117564	GC-508 Name: 10Xaphene solution Source: ULTRA Cat #: PP-271 Lot #: CH-2783 Exp. Date: 9/20/15	$12.5\mu\text{L} \times 7000\text{ppm} = 50.0\text{ppm}$ 0.50mL			10/2/13	10/2/13	W
2868	8760B GLAS VOC MIX	MEOH Fisher A4584-1 117564	GC-508 Name: 10Xaphene solution Source: ULTRA Cat #: PP-271 Lot #: CH-2783 Exp. Date: 9/20/15	$12.5\mu\text{L} \times 7000\text{ppm} = 50.0\text{ppm}$ 0.50mL			10/14/13	10/14/13	W
				X					
				X					
				X					

2

GC Sequence #	Standard Name:	Solvent	Stock Standard	Calculation STD V X STD Conc. = Final Conc. Total Volume	Ref. / Page	Prep. Date	Exp. Date	Init:
2858	8270 IS	Name: CH ₂ Cl ₂ Source: Fisher Cat #: 037-4 Lot #: 121220 Exp. Date: 12/2/20	Name: ULTRA Source: Semi Volatile IS Cat #: VS-108N Lot #: CH-1701 Exp. Date: 4/30/14	100 mL x 4000 ppm = 400 ppm 1 mL		9/16/13	9/20/14	B
2859	8270 SUN	Name: CH ₂ Cl ₂ Source: Fisher Cat #: 037-4 Lot #: 121220 Exp. Date: 12/2/20	Name: ULTRA Source: Semi Volatile IS Cat #: VS-108N Lot #: CH-1701 Exp. Date: 4/30/14	100 mL x 400 ppm = 400 ppm 1 mL		9/16/13	9/16/14	B
2860	8270 Mineral Spirit	Name: CS ₂ Source: Fisher Cat #: 573-500 Lot #: 121220 Exp. Date: 12/2/20	Name: ULTRA Source: Mineral Spirit Cat #: 260-703 Lot #: P-04874 Exp. Date: 8/21/15	0.2 mL x 5000 ppm = 2000 ppm 0.5 mL		9/16/13	9/16/14	B
2861	8081 Toluene Chloroform	Name: Hexane Source: Fisher Cat #: H304-4 Lot #: 125544 Exp. Date: 12/5/14	Name: ULTRA Source: Chloroform Cat #: PP-151 Lot #: CJ-4223 Exp. Date: 12/31/10	50 mL x 100 ppm = 0.2 ppm 25 mL		9/20/13	9/20/14	E
2862	8260B Gas VOC Mix	Name: MeOH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 11/3/14	Name: GC-508 Source: GC-508 Cat #: GC-508 Lot #: GC-508 Exp. Date: 11/3/14	12.5 mL x 2000 ppm = 50.0 ppm 0.50 mL		9/20/13	9/20/14	P
2863	8260B Gas VOC Mix	Name: MeOH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 11/3/14	Name: GC-508 Source: GC-508 Cat #: GC-508 Lot #: GC-508 Exp. Date: 11/3/14	50 mL x 5000 ppm = 500 ppm 5.0 mL		9/20/13	9/20/14	P
2864	8260B Toluene	Name: MeOH Source: Fisher Cat #: A453-1 Lot #: 113540 Exp. Date: 11/3/14	Name: GC-508 Source: GC-508 Cat #: GC-508 Lot #: GC-508 Exp. Date: 11/3/14	Detail in logbook x = 84-174		9/20/13	9/20/14	P

GC #: 2864

Analyst: PW

Expiration Date: 11/30/13

Standard Name: 8/10/13 8/15/13

Preparation Date: 9/29/2013

Compound Name	Source	Catalog #	Lot #	Exp date	Calculation STD V x STD Conc = Final Conc	Initial
Internal standard Mixture	Ultra solvent	STM-341N-1	CF-2990A	11/30/13	$\frac{250\mu\text{L} \times 2000\mu\text{g/L}}{10.0\mu\text{L}} = 500\mu\text{g/L}$	PW
External standard Mixture	Ultra solvent	STM-330N-1	CH-3116	10/31/14	$\frac{250\mu\text{L} \times 2000\mu\text{g/L}}{10.0\mu\text{L}} = 500\mu\text{g/L}$	PW
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	
					X =	

Final Volume: 10.0 mL

Added Solvent Volume: 9.50 mL

Total Standard Volume: 0.50 mL

GC Sequence #	Standard Name:	Solvent	Stock Standard	Calculation		Ref. / Page	Prep. Date	Exp. Date	Initial
				STD V X STD Conc.	= Final Conc.				
2844	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
845	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
2846	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
2847	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
2848	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
2849	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu
2850	8260B Gas VOC Mix	Name: MEOH Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	Name: GC-508 Source: Fisher Cat #: 4453-1 Lot #: 113540 Exp. Date:	12.5ul x 2000ppm 0.50ml	= 50.0ppm		8/13/13	8/13/13	Pu

Standard Name: 8th CB CA

Analyst: PW

GC #: 2850

Preparation Date: 9/3/2013

Expiration Date: 3/18/2014

[illegible]

Total Standard Volume: 0.60 ml

Added Solvent Volume: 9.40 mL

Final Volume: 10.0mL

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GC Sequence #	Standard Name:	Solvent	Stock Standard	Calculation	Ref. / Page	Prep. Date	Exp. Date	Initial
-809	8160B Gas	Name: MEOH Source: FISHER Cat #: A483-1 Lot #: 119640 Exp. Date:	Name: / Source: / Cat #: / Lot #: / Exp. Date:	$\frac{25.0 \mu\text{L} \times 7000 \text{ ppm}}{1.00 \text{ mL}} = 50.0 \text{ ppm}$	/	6/13/13	6/10/13	Aw
-810	8160B Gas	Name: MEOH Source: FISHER Cat #: A483-1 Lot #: 119640 Exp. Date:	Name: / Source: / Cat #: / Lot #: / Exp. Date:	$\frac{\text{Detail in logbook}}{x} = A4-P8$		6/13/13	7/31/13	Aw
-811	8160B LCS	Name: MEOH Source: FISHER Cat #: A483-1 Lot #: 119640 Exp. Date:	Name: / Source: / Cat #: / Lot #: / Exp. Date:	$\frac{\text{Detail in logbook}}{x} = A4-P9$		6/13/13	7/18/14	Aw
-812	8160B Gas	Name: MEOH Source: FISHER Cat #: A483-1 Lot #: 113540 Exp. Date:	Name: / Source: / Cat #: / Lot #: / Exp. Date:	$\frac{12.5 \mu\text{L} \times 7000 \text{ ppm}}{0.578 \text{ mL}} = 50.0 \text{ ppm}$	/	6/10/13	6/17/13	Pu
-813	8160B ISLSUR	Name: MEOH Source: FISHER Cat #: A483-1 Lot #: 119640 Exp. Date:	Name: / Source: / Cat #: / Lot #: / Exp. Date:	$\frac{\text{Check Details in logbook}}{x} = A4-P10$		6/13/13	11/29/13	Pu
-814	8270 IS	Name: CH2Cl2 Source: FISHER Cat #: D37-4 Lot #: 110832 Exp. Date:	Name: UHPA Source: Semi volatile IS Cat #: US-108N Lot #: CH-1701 Exp. Date: 6/17/14	$\frac{100 \mu\text{L} \times 4000 \text{ ppm}}{1 \text{ mL}} = 400 \text{ ppm}$		6/13/13	6/19/14	FB
-815	8270 SMR	Name: CH2Cl2 Source: FISHER Cat #: D37-4 Lot #: 110832 Exp. Date:	Name: UHPA Source: SMR, MR, SA Cat #: 15M-331-1 Lot #: CJ-4409 Exp. Date: 1/31/10	$\frac{100 \mu\text{L} \times 4000 \text{ ppm}}{1 \text{ mL}} = 400 \text{ ppm}$		6/13/13	6/13/14	FB

